

Journal of the Royal Institute of British Architects

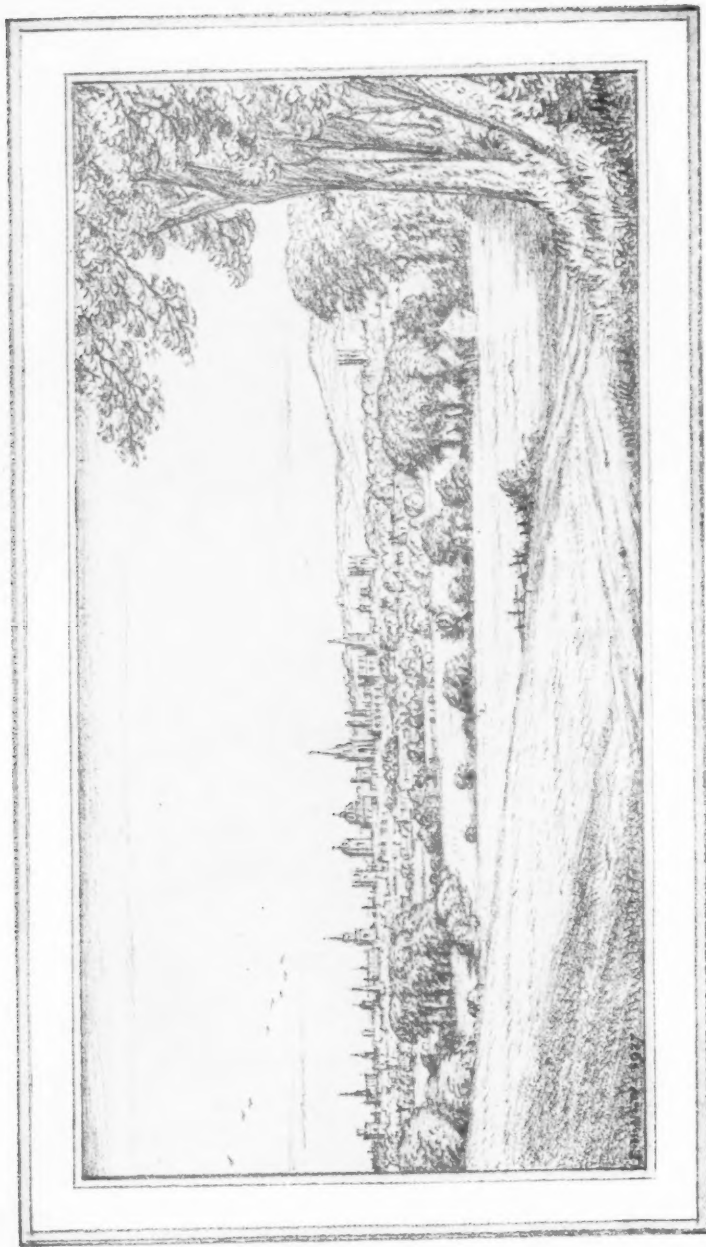
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OXFORD FROM HINKSEY HILL
Pencil drawing by the late Edmund New
Presented to the R.I.B.A. by Sydney D. Kitson [P.]



HAMBURG (FUHLSBÜTTEL). Station Building: Road Side

Photo J.D.

Some Aerodromes in Germany and Holland

BY JOHN DOWER [A.], SECRETARY TO THE R.I.B.A. AERODROMES COMMITTEE.

SINCE the final report of the Aerodromes Committee, of which the First Interim Report on "Town Planning and Aviation" (printed in the R.I.B.A. JOURNAL of March 7 1931) is a preliminary instalment, will not be completed and published till, at the earliest, the spring of 1932, it may be of interest to give here in advance some brief notes of some German and Dutch aerodromes visited in the course of a survey of existing aerodrome architecture during the summer of 1930.

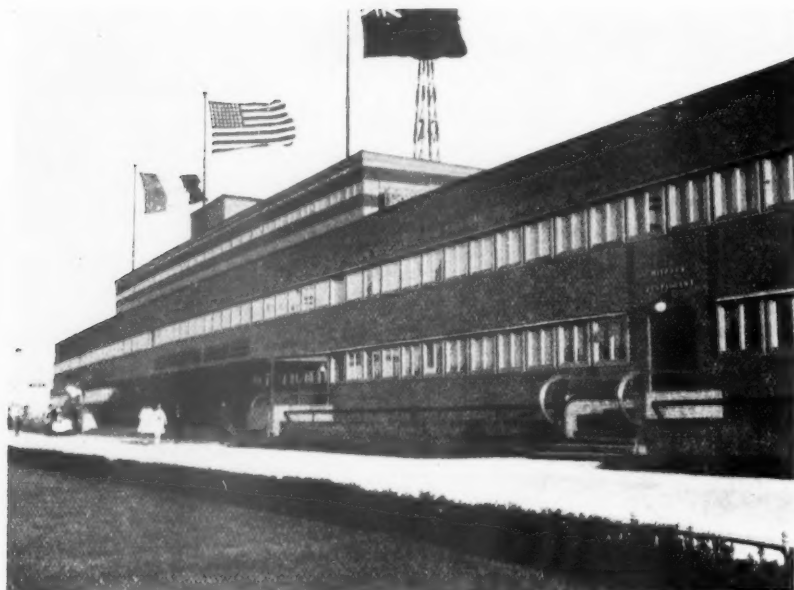
Any survey of the condition and progress of European aerodromes and the ground equipment of civil aviation must be centred round Germany. Her central position, the wide spacing of her principal cities and the prohibition of military aviation by the Peace Treaty have given Germany an initial advantage and stimulus which she has not failed to seize. General public air-mindedness and the acceptance of the aeroplane as an everyday means of commercial transport were the leading impressions of a first view, which from limitations of time had to be confined to a small part only of the widespread network of routes and landing places operated by the Deutsche Luft Hansa (German Airlines). The "airports" of Berlin, Hallé-Leipzig, Frankfurt-on-Main, Hamburg, and Lübeck-Travemünde may be selected for short description as being the most interesting of those visited. The last (Trave-

münde) as a combined aerodrome and seaplane station is in many ways a separate and special case and it is worth while briefly to contrast it with another station of the same sort visited at the same time—the Kastrup airport of Copenhagen. Individual descriptions may be concluded with the two chief airports of Holland, Amsterdam-Schiphol and Rotterdam-Waalhaven: after which I add some more general impressions based on all the aerodromes I visited and the air-routes I traversed between them.

BERLIN

The Tempelhof aerodrome at Berlin is probably on the balance the most satisfactory aerodrome in Europe. It enjoys the special advantage of being placed on the fine, well-drained and level surface of an old parade ground of ample size close to the centre of the city. I tested personally its claim to be not more than 15 minutes from the Unter den Linden by underground and foot—a proximity which is probably unrivalled.

The central administration building with large restaurant accommodation and all other necessary services amply housed is a simple restrained block of real architectural merit; its materials externally are red-brown sand-faced brickwork alternating with long unbroken lines of wood-framed windows painted cream. Flanking this building at either side are ranges



BERLIN (TEMPELHOF). Station Building: Road Side

Photo J.D.



BERLIN (TEMPELHOF). Hangars

Photo J.D.

of hangars excellent in design and appearance and of very considerable extent. Already more than 100 commercial type aeroplanes of average size can be housed at once, up to a size of 125 feet over the wings by 100 feet long by 25 feet high; and further hangars to house still larger aeroplanes are contemplated. The structures generally are in brickwork for the walls—cement-rendered and colour-washed to a bright cream outside, white-washed inside—with steel-framed roofs covered in asphalt and patent-glazing. The grouping is into two long units with four and six door-spans respectively, workshop and office block being placed immediately and forming solid central masses. Flag-staffs and other embellishments of a very simple nature are picked out in scarlet paint. Fuelling is by large underground tanks of 160,000 litres capacity with electric pump service to a number of points in the hangars and on the paving outside them, where long flexible hoses are wound on drums in underground traps. This fuelling system seemed extremely well designed for safe and rapid service.

The bright colouring and simple shapes give an air to the whole mass of buildings at once businesslike and efficient and suitably gay and lively. Public open-air enclosures, with restaurant facilities, are large and well-placed between the administration block and the paving where planes take up and set down. If one may venture on some points of criticism they are as follows:—(1) there is a rather ugly control-tower and aerodrome police station badly placed in front of the central block; but this is obviously a survival from the initial development of the ground and may be expected to disappear before long; (2) two 140 feet wireless masts with their accompanying web of stays and aërials stand right on the aerodrome and form very considerable flying obstacles; such equipment should be placed at a distance and connected by land-line; (3) the night lighting system, which I had an unexpected opportunity of examining on a half hour's night flight over Berlin and Potsdam, seemed to my amateur view both extravagant and inefficient; this difficult subject is, however, outside our immediate range.

The aerodrome belongs to a special company under the licence and general control of the municipality of Berlin, the Prussian state government and the federal government, who are also the chief shareholders. The progress made by this company in seven years of work (1923–1930) is exemplary. In addition to all the buildings, the whole landing area (4,600 by 3,600 feet) has been fenced, turfed, etc. (in the old parade ground days it was sand-covered), and a very large area (to be increased still further in the near future) has been concrete-paved.

HALLÉ-LEIPZIG

The Hallé-Leipzig aerodrome near the town of

Schkeuditz is interesting particularly in that the site was chosen as central to and serving a number of neighbouring towns and supported jointly by them. Finance and service were thus eased both for the towns themselves and for the Luft Hansa. This seems a sound model for industrial areas in Britain such as the Leeds-Bradford area, the "Potteries" towns and others. It is a good example of German municipal vigour and progressiveness that the town of Halle abandoned an already started smaller scheme for an aerodrome of its own to take the lead in this larger joint enterprise.

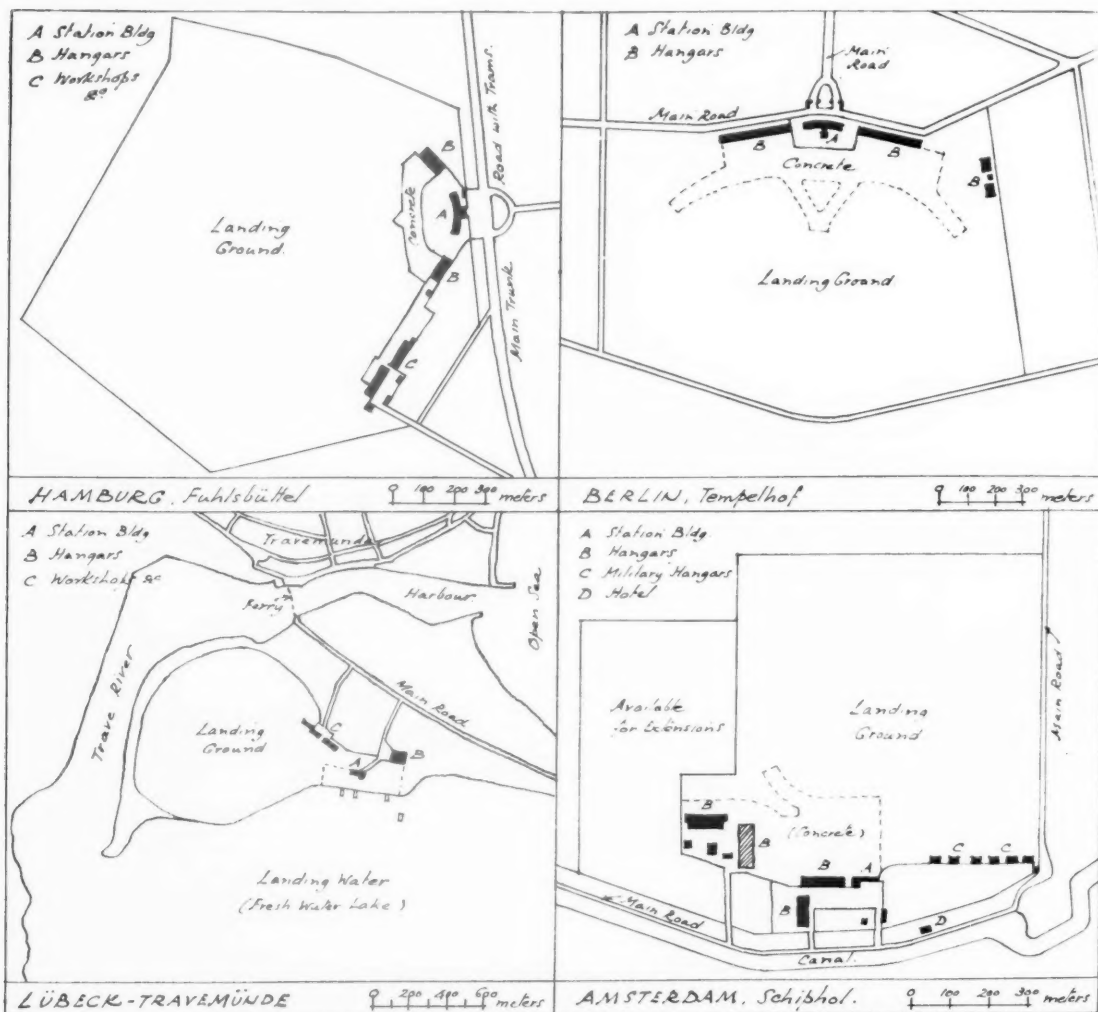
One valuable result of this joint treatment is that the aerodrome is placed in quite open farming country and is of splendidly large size, permitting the marking out by a circular white path of a landing area of 1,000 metres diameter. The aerodrome buildings are placed well away from this area with space for a very large paved taxi-ing apron between. Ultimate development envisages a large low central administration building linking two huge hangar and workshop blocks, the whole to form a strikingly bare and modern composition with the great merit that everything is kept low—to the minimum height for hangars of about 40 feet.

The main wireless masts are kept well away, about $1\frac{1}{4}$ miles from the field, there being only small, low receiving aërials on the spot. Of this projected scheme only one large hangar is as yet completed: it measures about 500 by 100 feet in two main bays each giving door clearance of about 190 feet by 30 feet high. Workshops and storerooms are at each end; a lavish heating system is installed; the steel construction supports a roof of reinforced hollow tiles covered with asphalt and gravel; fuelling is by electric pumps and the folding doors are electrically operated. The whole forms the finest hangar I have seen. By contrast, the present administration building is a very temporary wooden affair on two floors with a small observation tower on top. The arrangement is, however, very convenient and worth study, and the German genius for neat and colourful use of cheap materials makes it no disgrace to the field.

The system of night lighting here is like that of Berlin on a smaller scale and is open, I think, to similar criticism, while the two are radically inconsistent in that obstruction lights are blue here and red at Berlin.

FRANKFURT-ON-MAIN

The chief interest of the aerodrome at Frankfurt is as an example of the very successful conversion of a group of fine old farm buildings to use for all the purposes of a busy aerodrome except the hangars. Finely kept "English" gardens are the special pride of the aerodrome manager and add much to the charm of the spacious old stone buildings. The two big hangars are less successful. To effect a saving in cost estimated at 50 per cent., wooden roof construction has been em-



SITE PLANS, SHOWING RELATION OF AERODROMES TO THE APPROACH ROADS

employed, with the result that in the more recently constructed of the two the main lattice beam over the doors has sagged so much as to put the hangar out of operation till considerable and expensive repairs can be made.

HAMBURG

The recent completion of its "station" building makes the Fuhlsbüttel aerodrome of Hamburg a very close rival of Berlin for the first place in Europe. Architecturally, indeed, it is the finer of the two, but

its much greater distance from the centre of the city relegates it, from a town-planning point of view, to second place. Although well out in the northern suburbs, it is, however, relatively well served by the electric suburban railway and by a new trunk road with trams, planned in relation to it. A very large, roughly pentagonal, area has been reserved for the field on which a marked out circular flying space of 1,000 yards diameter is being developed; considerable drainage, etc., work is necessary and the full area is not yet ready

for use. The buildings are on the eastern side in a line rather more sharply curved than the landing field edge, thus making the enclosures and paved space between deepest at the centre where depth is most needed; the arrangement also shortens communications and gives splendid observation of all the working of the aerodrome from all points, especially from the central point where the control tower is logically placed. Though there are several other buildings surviving from an earlier stage of development, the three central buildings only form part of the plan of ultimate development and need not concern us now. These are the smaller hangar A—approximately 190 feet by 19 feet over the door opening by 100 feet deep; the larger hangar B—approximately 260 feet by 26 feet over the door opening by 130 feet deep, and the administration building between them covering almost all other necessary services. Of the hangars I need only say that they are fine buildings in brick and steel construction which derive a distinctive and by no means unpleasing character from a markedly pitched roof, the ridge being at right angles to the door frontage which has thus the centre-line emphasis of a gable-end shape. The provision of workshops, stockroom,

rest-room and office space at the sides of the hangars is adequate and well planned; the stockroom in particular deserves mention for its very large (but none too large) size and its orderly arrangement of stocks of thousands of different parts and tools in compartments, racks and drawers. The roofs are in terra cotta blocks asphalted and gravelled, heating is by hot air fans, and the straight sliding doors are electrically operated. The wide paved apron across the whole frontage between the hangars is in half-metre cement blocks laid in mortar on a bed of ashes.

But the glory of Hamburg is the administration building, fit to rank with the finest architectural achievements of to-day without any restriction of type or use. I must in the main leave the plan to speak for itself. Accommodation is arranged on four floors in a long rectangle bent to the flat curve of the layout as described above. The upper floors are recessed back on the flying field side to provide a series of three terraces, the flat roof making a fourth.

The elevations, in brick with some white cement and long lines of continuous windows are frankly modernist, in their direct expression of plan and insistently horizontal treatment without any decorative additions. Broadly, freight traffic occupies the basement, along

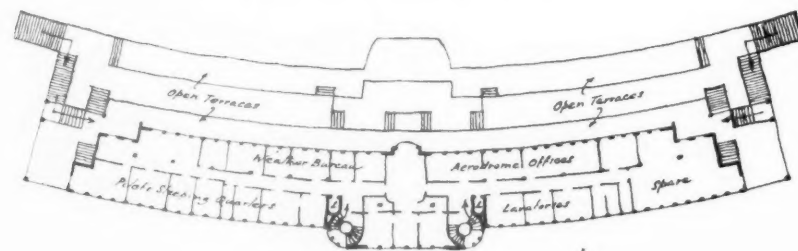


Photo J.D.

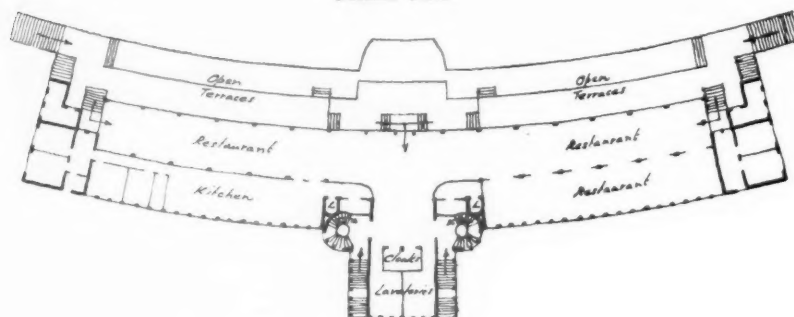
HAMBURG (FUHLSBÜTTEL)
Station Building: Restaurant Terrace

FUHLSBUTTEL AERODROME HAMBURG STATION BUILDING

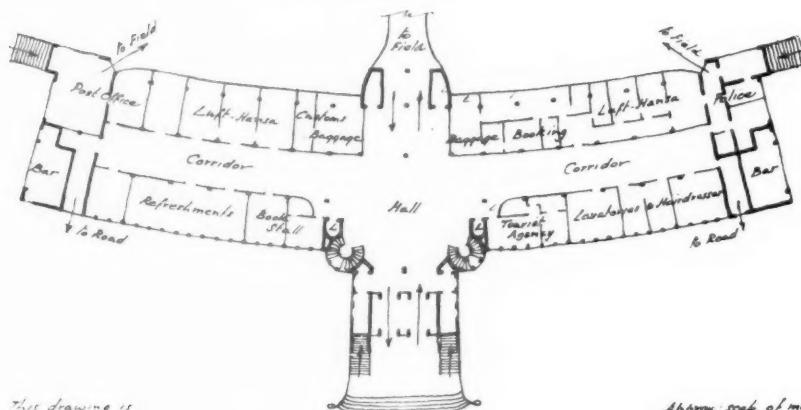
Dyrsen & Avenhoff, Architects, Hamburg



Second Floor



First Floor



Ground Floor

This drawing is
diagrammatic only
to show arrange-
ment of accommodation

Approx. scale of meters
0 10 20
J.G.D. del. 25.8.31



Photo J.D.

HAMBURG (FUHLSBÜTTEL). Station Building: Road Side

with heating plant, storage and garages; the ground floor is given to passenger traffic, with postal traffic and aerodrome police at either end; the first floor is entirely restaurant; while the second floor accommodates the aerodrome management, meteorological and radio staff, pilots' sleeping quarters and space for future expansion. Great ingenuity by the architects (Dyrssen and Averhoff of Hamburg) has provided separate entrances from both road and field sides for every main department of traffic, while preserving the closest intercommunication wherever it is required. Thus the building could serve a traffic many times heavier than the heaviest yet experienced without any muddling or dislocation, while thousands of sightseers can use the enclosures, terraces and restaurant by outside approaches without the smallest interference with other services. The internal treatment is as simple and effective as the external and as devoid of unnecessary ornament; the main hall and corridors and stairs, for instance, have white distempered walls with mottled grey terrazzo flooring divided by $\frac{3}{4}$ inch stainless steel strips to prevent cracking, black tile skirtings and aluminium paint with some vermilion for emphasis at salient points and for notices. The restaurant treatment is suitably softer and in richer colouring, but equally satisfying; and a bright lemon yellow is cheerfully used in many of the offices.

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TRAVEMÜNDE AND COPENHAGEN

As explained above, I describe the German aerodrome of Lübeck-Travemünde and the Danish aerodrome of Kastrup-Copenhagen together, since they are examples of the same specialised type—that is stations for use by both land- and sea-going aircraft and largely used by traffic transferring from the one to the other. Both (Travemünde especially) have points of considerable interest, though neither is on anything like the scale of Hamburg. The general arrangement obviously called for is the grouping of the buildings in some position between the flying field and the flying water, and broadly speaking this has been satisfactorily followed in both. Both flying fields are of generous size with perimeter admirably clear of obstructions. At Travemünde a single large hangar (190 feet by 40 feet door opening by 190 feet deep) houses all planes both land and sea and is the finest structure of its kind I have seen; above the brick walls and huge metal doors, the vast roof trusses support a hollow tile roof with a continuous glass clerestory all round. The only ornaments are the large and admirably placed heraldic emblems of the Reich, of Hamburg and of Lübeck. At Copenhagen land and sea planes are housed separately, the former in two, the latter in one hangar. These are much smaller and more temporary buildings than Travemünde's but the land plane hangars at their standard

seem to me distinctly good-looking and effective; the structure is in wood on a steel frame with a roof covering of bituminous felt. Travemünde's "station" building is small but admirable, covering on a single floor and in excellent arrangement all the required services, though the restaurant of the original plan proved too small for the many sightseers and a new wing had to be added. It might well be taken as a model for newly developed British aerodromes. The materials, artistically speaking, are a pleasant russet brickwork and paint of well chosen colours, predominantly pillar-box red and cream and pale grey and black. The Kastrup station is of much the same size, but by comparison dull and comfortless; it is both less well arranged and less well related to traffic, especially from the sea plane side.

AMSTERDAM

The aerodrome at Schiphol serving Amsterdam is on the whole very satisfactory and well equipped. It is much too far from the city; but granted that economic reasons controlled the distance, the site has been well-chosen at the crossing of future main trunk roads, now in process of construction. The present communication by land is poor and indirect, but since it is only temporarily so it does not matter much. Service by water traffic is direct and much used. The field is in the eastern corner of what was, 200 years ago, the huge Harlemmer-meer lake, the drainage of which has left it a firm level "polder" presumably well below sea-level. Considerable liability to fog seems inevitable, but it should be free from the smoke and smoke-laden fogs of the city being on the side of the prevailing wind—south-west. The grass surface is good and has been thoroughly land drained with porous piping; how they dispose of the water is a matter that we may perhaps leave to the countrymen of Vermuyden to determine for themselves. The landing space clear of buildings and practically clear of one in ten obstructions is almost exactly a square of 800 yards; the buildings, car-parking spaces, etc., adjoin along the south eastern side and there is a further 500 by 800 yards area available for extensions on the south-west.

The various buildings have been somewhat arbitrarily disposed as development required them, probably without much general planning in advance. Convenience and economy as well as architectural effect have suffered thereby. The "station" building, however, which comprises practically all the accommodation except hangars, workshops and hotel, is well-placed in the centre of things with very generous approach space. It is an attractive single-storey flat-roofed composition in the typical brickwork of the modern Dutch style. The extra height, with clerestory windows, of the principal rooms, and the control tower on four floors, give emphasis to the plan and

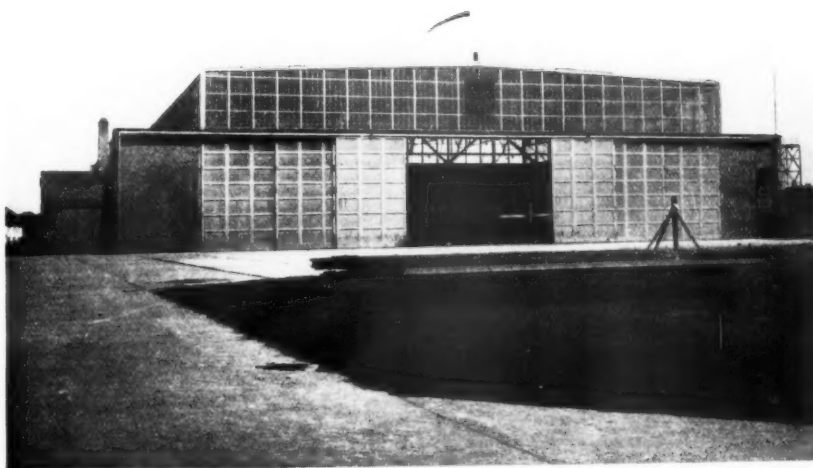
interest to the sky line. For no very obvious reason the plan is radically a-symmetrical. The control tower is logically the centre of the scheme, but the accommodation on the one side—restaurant, booking and waiting hall, offices of operating companies and outgoing services generally—includes all the rooms of extra height, is L-shaped and is considerably larger than the accommodation—incoming services, customs, radio, aerodrome offices and stores—which forms a plain rectangle on the other. The arrangement, I felt, had not quite been "pulled together." A more serious criticism is that the accommodation throughout is on rather a small scale, and that additions, which heavy traffic is already demanding, will be difficult to fit on into an organic whole. The control room, placed just high enough to get a clear view over the tops of hangars and neighbouring trees, and with a full prospect of the whole field, though not of the fronts of the hangars, seemed particularly well planned and equipped. My guide, who was often on duty there, raised one interesting point of criticism however: namely, that the glass sides, which are vertical, should have been tilted slightly to prevent excessive and muddling reflections of the various aerodrome and other lights at night.

Since, with the exception of our own Croydon, this is the only aerodrome I have seen really adequately provided for night use, I may perhaps devote a paragraph to this equipment, which (together with the signalling apparatus for both day and night use) is all worked from the control room. The switchboard arrangement seemed simple and effective, with the singly noticeable defect that, to discover the wind direction, the duty man must go out on to the iron-railed concrete balcony and look up at the vane swinging above the roof. An internal wind indicator coupled to the vane and placed next to the landing floodlight switches (possibly even automatically controlling them subject to a general master switch) would not seem difficult to devise. The landing floodlights, eight in number, are spaced at approximately equal distances around the perimeter, only the three most nearly facing down wind, over which aircraft would land, being used at any one time. By this means dazzle is avoided. Each is of 3 K.W. power with lens and mirror reinforcement arranged to give a 90° horizontal spread of beam. The centre of the beam is about 6 feet above the ground probably a sufficient height only where the field is, as here, very closely approximating to dead level. There are also a neon beacon of considerable height and very distinctive character (at least from the ground at a distance of four miles or so), with flood lights to the fronts of the main buildings; but the eight boundary lights, one at each landing flood point, seem an inadequate provision.



LÜBECK-TRAVEMÜNDE. Station Building

Photo J.D.



LÜBECK-TRAVEMÜNDE. Hangar

Photo J.D.



Photo J.D.

AMSTERDAM (SCHIPHOL). Station Building from approach road



Photo J.D.

COPENHAGEN (KASTRUP). Hangar

The hangars at Schiphol do not call for any special comment; they seem quite effective but make little attempt to solve the problem of good architectural appearance. Hangar A is in three bays with door spans approximately 80—100—80 feet; Hangar C is in two bays with 130 feet doors each. The projected Hangar B, of which the foundation work is now being done, seems likely, from drawings which I saw, to be a much finer structure on a very good plan. It will be in two bays, each with 150 feet doors and 120 feet deep, with a wing at each end for staff and store rooms, etc., and a heating plant block at the back. Brick, steel and glass are the chief materials above ground, but a large proportion of the cost goes in elaborate foundations of reinforced concrete on piles, necessitated by the great depth of soft subsoil.

ROTTERDAM.

The Waalhaven aerodrome of Rotterdam is of far less interest than Schiphol and calls only for very brief comment. Though not far from the centre of activity in town and harbour, the bulk of traffic has to cross on a river ferry to get to it and connection is not very good. The buildings are arranged at a corner of the field—the restaurants and public enclosures occupying the actual corner, the administration, customs, garage and police quarters in small separate buildings stretching along one side, the hangars and club house at right angles along the other. The multiplicity of separate buildings does not seem to have anything to commend it, but the general arrangement seems well fitted to the site and approach and not inconvenient in service. The buildings are all of a frankly temporary character in wood construction, the hangars in corrugated sheeting, asbestos, etc., on light steel frames. The architectural effect is nothing very great, but the uniform use of bright blue and yellow paint gives a tidy liveliness to the smaller buildings. Brick paving instead of the more usual concrete seems to be used quite satisfactorily in front of the hangars and elsewhere.

The Dutch are proposing a new aerodrome just south of Delft to serve both the Hague and Rotterdam. This, if carried out, may take much of the present Waalhaven traffic and reduce its importance; but in my judgment the scheme is a mistaken one, the distances being too great. The merits of a joint aerodrome in the country between two or more towns can easily be overrated. Even the admirable Halle-Leipzig aerodrome (described above), busy as it is with through and exchange traffic, is not close enough to either town to give really good service. An expanded Waalhaven for Rotterdam, and a new aerodrome serving The Hague and its large seaside suburb Scheveningen would seem a more practical solution. A site for the latter, close alongside both towns, would, I believe, not be difficult to find.



Photo J.D.

AMSTERDAM (SCHIPHOL). Station Building from the field

GENERAL IMPRESSIONS.

1. Safety considerations are paramount. Germany has not yet satisfied these everywhere. There are too many exceptions to the rule of fireproof construction: the wireless masts at Tempelhof are an outstanding example of the many unnecessary obstructions—purely decorative flagstaves, which are widely prevalent, should be strictly barred; night lighting is not sufficiently worked out or consistent, while flood lights for landings are apparently not yet used at all. The obvious architectural limitation imposed in this respect is to keep all buildings as low as possible, omitting all masts and other "sky-line features," and equally to keep all buildings well-back from an efficiently marked out area used exclusively for landing and taking-off. All illumination should be planned integrally with the buildings: this, broadly speaking, seems to have been done at Schiphol, which, with its floodlights, etc., is ahead of any German example.

2. Traffic considerations are next in importance.

The Germans in this respect are very thorough and successful, though tending perhaps to over-ingenuity. The German nation is, however, markedly obedient to authority and no doubt follows faithfully the elaborate directions as to where they may go in or out or not go at all. The comings and goings of such a very varied traffic and personnel—machines, spares, fuel, pilots, mechanics, office staff, radio and meteorological staff, passengers and their luggage, mails, freight, sightseers and restaurant users and many others—demands very ingenious treatment if there is to be a minimum of clashing and loss of time. Of this problem the Hamburg plan is the finest solution I have seen.

3. Aerodrome buildings should be planned as temporary or semi-permanent or as capable of expansion and adaptation or both. Progress in aviation is bound to be very rapid and changes in its ground requirements both radical and unforeseeable. The Germans have grasped the importance of this limitation very much better than the Dutch at Schiphol or the Danes at Kastrup, and are contriving to produce very good work in spite of and even because of it. They use cheap and simple materials admirably and are very skilful in arranging for successive stages of development. The central block at Berlin has already been expanded twice, yet photographs at each stage show an apparently complete and symmetrical structure; the building as it stands shows no signs of

make-shift or patchwork and is to be still further extended in the future.

4. Aerodrome buildings should have individuality and readily recognisable form—for the self-advertising value so obtained if for no other reason. German and Dutch modernism achieves this admirably and seems to me well fitted to express the speed, newness and liveliness of aviation; even those who think it as a style profoundly unsuitable for other buildings—churches for example—will probably admit that it succeeds here. By comparison Croydon is a dull and grim sobriety and does not express aviation at all.

5. The Continent generally is employing architects for its aerodrome work everywhere, and, indeed, have employed them from the start. The most important result, I think, is fine planning. Planning is the architect's chief job and most essential skill, little as the general public realise it. For aerodrome work acute planning, as I have argued above, is the vital need—all the more vital because of the time factor; it is little use to travel in the air twice or three times as fast as on the ground unless all the accessories of air travel also work at the highest possible speed. Only by greater speed and the maximum of comfort in all respects can aviation make the rapid progress that its supporters all desire. I returned from my tour doubly convinced of the important share that architects must have in this progress if it is to be as rapid and sound and nationally useful as possible.

Charing Cross Bridge: The Advisory Committee's Report*

BY ARTHUR KEEN [F.]

THE report now presented to the London County Council is the outcome of the arrangement made when the scheme considered by Parliament in February 1930 was rejected by the Private Bill Committee. A committee was then set up, under the chairmanship of the Right Hon. Sir Leslie Scott, K.C., to study the matter afresh and produce an agreed scheme for the new bridge. It comprised representatives of the London County Council, two Borough Councils, the Southern Railway, the Underground group of companies, the Port of London, the Royal Fine Art Commission, the Royal Academy, Institution of Civil Engineers, Surveyors' Institution, Town Planning Institute, and the R.I.B.A., the latter representative being Dr. Raymond Unwin.

Now, for the first time, the undertaking has been regarded by the authorities as a problem in Town Planning.

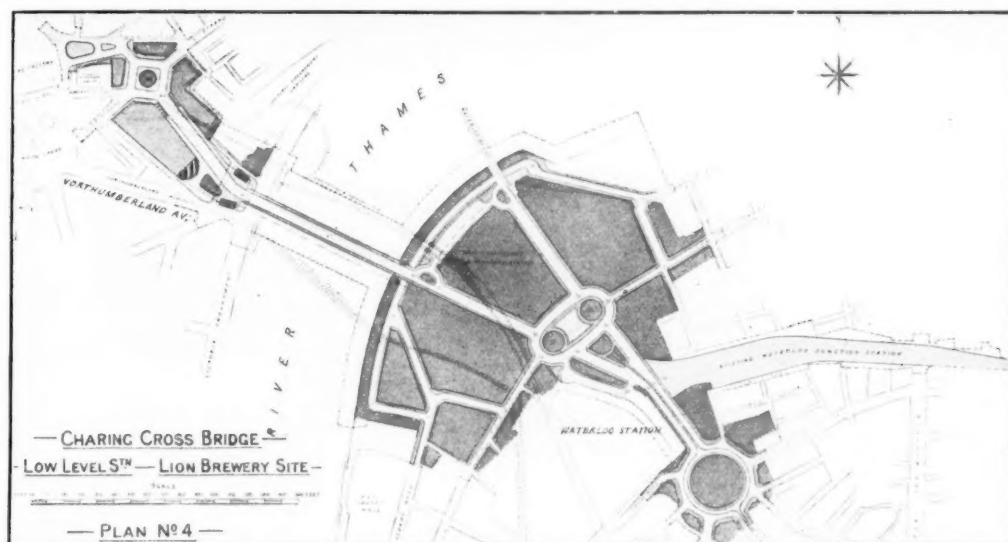
The report shows conclusively that a road bridge

is urgently needed, and at Charing Cross; further, that in view of the traffic arrangements required in the Strand at the bridge approach, and the difficulty of future station extensions, the retention of the existing station is undesirable. (At present the enlargement of the station or building over the forecourt is forbidden by Act of Parliament.) On the other hand, the evidence of the Chairman of the Railway Company disposed of the argument that if an independent road bridge were formed the railway bridge would disappear by reason of decay in a few years. He stated that the present bridge was good for fully fifty years.

All who had prepared schemes for the bridge were invited to send them to the committee. Seventy proposals were received; ten were selected for closer consideration, and six schemes were finally studied in detail. These six are illustrated in the report.

The decision of the committee is a compromise brought about partly by the unwillingness of the Railway Company to retire from their present site at Charing Cross, or in the alternative from the site provided

* P. S. King and Son, 14 Great Smith Street, S.W.1. Price 2s. 6d.



Block lent by "The Builder."

Reproduced by permission of the L.C.C.

The scheme submitted by Sir Murdoch Macdonald, K.C.B., M.Inst.C.E., Mr. William Muirhead, M.Inst.C.E., Mr. D. B. Niven [F.], Mr. W. D. Caröe [F.], Mr. E. Maxwell Fry [A.], and Mr. Thomas Adams, P.P.T.P.I., as considerably modified by the L.C.C. Engineers

in the scheme presented to Parliament—*i.e.*, the triangle between the river and the two bridge heads on the south bank of the river—and partly by the estimated cost of the best schemes presented being in excess of the limit imposed.

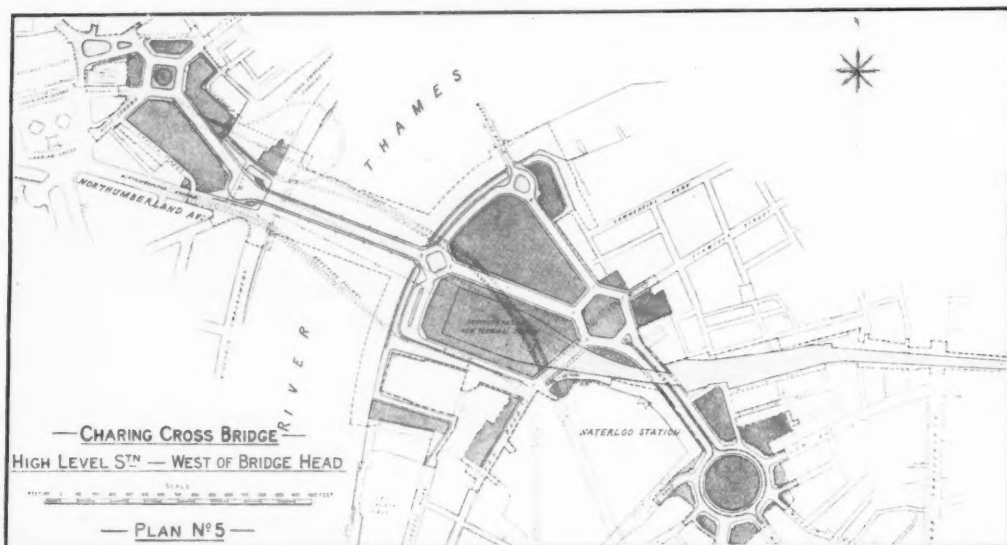
The report fully justifies the opposition that was raised against the official scheme, and shows the value of many of the counter proposals that were made. The chief desire of the critics of the official scheme was to get rid as far as possible of the elevated railway running from London Bridge to Charing Cross, and in any case to abolish that portion of it which runs from Waterloo to Charing Cross. It appears from the report that the committee confidently hoped to adopt plan No. 3, which placed the new station on the site of the present Waterloo Junction Station, thus leaving all the intervening space between the station and the river free from overhead constructions of any sort, whether carrying road or railway. The Southern Railway Company declined definitely to adopt this scheme.

The other scheme, which left the whole lay-out open to the sky, and which seemed to the committee to be possible for presentation as an agreed one, was the joint production of Sir Murdoch Macdonald and Mr. Wm. Muirhead, civil engineers, Messrs. D. Barclay Niven, W. D. Caröe and E. Maxwell Fry, architects, and Mr. Thomas Adams, town planner. It

deserves unqualified praise because it meets the desire of the Railway Company for a station on the river front, meets the road traffic requirements, and at the same time presents a fine lay-out as seen from the architectural standpoint, and one that is quite free from overhead constructions.

The solution of the problem by this scheme is based on the fact that the present ground level at the river front on the south side is much below the bridge level; actually it is 30 feet below Waterloo Bridge. This enables the railway station to be constructed on the ground level, with an entrance from the river embankment, and with its main approach on the level of the bridges. The railway as it comes from London Bridge would start to run downwards as soon as it had cleared Blackfriars Road, and would pass under instead of over Waterloo Road. The station, open to the sky, would thus form a courtyard in the centre of a great block of buildings abutting on the river, and on three important roads: these roads would be raised so as to serve Waterloo Station at platform level. The whole of the road traffic from Waterloo Bridge and from the new bridge would be finally distributed west, south and east by a traffic circus at the New Cut. The plan has the advantage of freeing the squalid district that lies between Waterloo Road and Blackfriars Road of a great part of its elevated railway viaduct.

This scheme, No. 4, has been turned down on



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The scheme submitted by Sir Giles Gilbert Scott, R.A. [F.] as slightly modified by the L.C.C. Engineers.

finance: the net cost is too high. Much property has to be taken, and although most of the land ultimately goes back to sale by way of recoupment, the valuers can only give it a selling value that is a practical certainty, even though in their heart of hearts they may be just as confident as are other people that the general increment arising from the improvement of the neighbourhood must justify vast outlay—in fact, that the greater the acquisition of property the better would be the ultimate result. A valuer must proceed on a basis of ascertained fact: imagination is denied to him. He must not regard very much the attraction, to the building public, of a fine, open lay-out clear of all overhead encumbrances and possessing really good sites in the immediate neighbourhood of the County Hall and of a magnificent hotel that will be used by royalty and ambassadors.

One would wish that the committee had put forward this scheme as well as No. 6 with a reasoned statement upon the question of finance, or at any rate given us the actual figures. The general history of London improvements shows remarkable accuracy in estimates, but it must not be forgotten that the Northumberland Avenue improvement resulted in an unexpected profit of £120,000 on an outlay of about £700,000, and the present improvement might very well follow it.

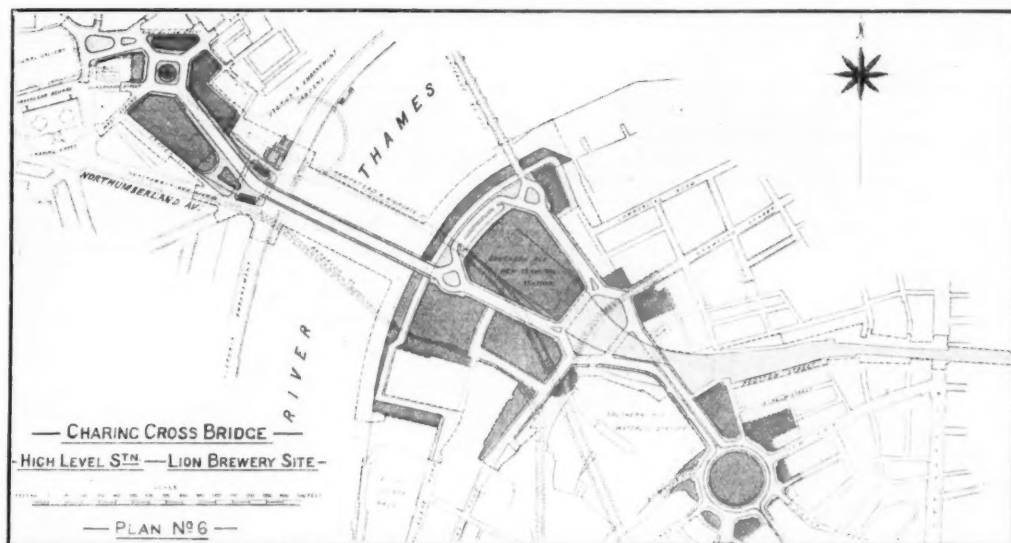
A few "demerits" in Scheme 4 are noted, but they are quite unimportant. For instance, the descending railway must certainly offer some obstruction

to the streets at present passing under the line; but these streets have a headroom of about 22 feet under the girders of the bridges, and two of them would continue to run through with a sufficient headroom; another of them is so near to Waterloo Road that the obstruction is easily dealt with, and the remaining two are short streets of tiny cottages with practically no wheeled traffic.

It should be noted that this scheme as illustrated has been materially altered by the committee from the plan submitted to them, and published elsewhere; the alterations increase the cost by destroying Coutts's Bank and the Old Vic Theatre.

Mr. Harley H. Dalrymple Hay has submitted a plan in which, by moving York Road bodily nearer to the river, he obtains enough space for a new station placed between Waterloo Station and Westminster Bridge Road. The Southern Railway Company opposes this scheme "on railway grounds." Apparently the principal exit from the station would be in Westminster Bridge Road, and the report points out that it would throw additional vehicular traffic into that road. The plan is not illustrated in the report.

Scheme 6 is the one that the committee recommends, and we are told that it was evolved, not from the official scheme, but from Scheme 4, by putting the railway up and the roads down. The new bridge comes to ground at York Road, as does also Waterloo Bridge at the present



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The scheme drawn up by the L.C.C. Engineers to the instructions of the Committee and approved in the Majority Report

moment, and this is a very great improvement as compared with the parliamentary scheme, in which the bridge approach was carried southwards on a high level until it reached the New Cut, nearly half a mile inland, passing over Waterloo Road on its way. Unhappily, the railway will still pass over Waterloo Road and over York Road, but in the latter case at a great "place" 550 feet wide. The portion covered over is about $2\frac{1}{2}$ acres in area.

Scheme 6 seems definitely to be well suited to traffic requirements, and in particular those of the tram and bus services: it gives a certain length of river embankment as part of the plan, and it presents a fine architectural lay-out on the river front centred between two bridges. As regards the northern approach to the bridge, the plan delivers the whole of the traffic from the bridge into the Strand without escape: that the committee is uneasy about it is evident by the references made to further consideration of approaches from the north and north-west, and the Mayor of Westminster declined to support any scheme that did not include the required street alterations as part of the plan; such alterations, however, were outside the reference to the committee.

The committee seems to share the view of the Ministry of Transport that Northumberland Avenue should not be made to lead on to the bridge by a raising of its level, and by bringing up spur roads from the Embankment leading to it and also leading to

the bridge. The contention is that nothing should be allowed to interfere with the free running of traffic between the Embankment and Northumberland Avenue or the fast running on the Embankment itself, but there are so many advantages to be derived from having several alternative ways on to the bridge that the report might well have devoted some space to a carefully reasoned statement on this matter. The Northumberland Avenue traffic would certainly have to run half-way round a circus, but the whole of the Embankment traffic would remain unimpeded. To spare a lightly loaded street like Northumberland Avenue at the expense of an already congested one like the Strand seems a most unfortunate mistake.

Sir Giles Gilbert Scott was the author of Scheme No. 5, putting the new station on the river front, but to the west of the new bridge instead of between it and Waterloo Bridge. It still leaves York Road and Waterloo Road overbridged by the railway, but it leaves the bridge approach itself open to the sky right through to its connection with Waterloo Road, and away towards the east—a very important point. Among the objections to it is the crowding of the railway line against the front of Waterloo Station, which Scheme No. 6 avoids doing. Apart from the overbridging, the pros and cons of this scheme and the recommended one, No. 6, are nearly balanced, but they are too numerous to be set out here.

Schemes 1 and 2 provide for the retention of the

present station and railway bridge, with all the consequent drawbacks referred to in the report. No. 1 greatly increases the width of overbridging over the Embankment and the river: it provides no southern embankment as part of the plan, and it is bad architecturally. No. 2 involves a suspension bridge which cannot be placed centrally over the river, and it carries the bridge approach right over the Embankment Gardens and through the Adelphi, which, however, is given a connection to the bridge. It involves moving two of the tubes. The committee objects on æsthetic grounds to a bridge of any sort cutting into the area between Charing Cross and Waterloo Bridge, and also to the retention of the eyesore of Hungerford Bridge.

The recommended scheme, No. 6, will call for a great deal of architectural consideration in its details, and it gives the opportunity for many fine effects. The treatment of the great Place south of the station with the railway over it and an omnibus depot below is a matter on which a great deal depends, and it is to be expected that a good deal of competition work will be arranged as the undertaking progresses.

The report is interesting reading, and one can only

be struck with the exhaustive care given to the detailed study of the plans and to finding out the merits and demerits of each. The Chairman must be congratulated on a very orderly and well-reasoned report, although his duties must have been made difficult by the unusual fact of several members of his committee putting forward schemes of their own, for which they would have a natural preference. These schemes seem to have been produced as the enquiry proceeded and as possible solutions of the problem suggested themselves: they appear to have been treated by the committee without fear or favour.

The result of the enquiry is a great disappointment to those who looked for the abolition of all road tunnels, especially in view of the fact that three schemes presented to the committee gave complete "open to the sky" lay-outs, and one of these placed the station on the site desired by the Railway Company, facing the river bank.

Elevated roads that do not involve tunnels in a city are not a drawback: they merely give building sites with the basements already excavated: elevated railways, on the other hand, are accursed things.

Two Notes on Vitruvius

BY PROFESSOR F. S. GRANGER [A.].

FRAGMENTS OF A MANUSCRIPT OF VITRUVIUS.

Mr. Charles Johnson, at the last General Meeting of the Classical Association, kindly drew my attention to some fragments of a MS. of Vitruvius, which were to be found at the Public Record Office. They are among miscellaneous papers: Bundle 34, File 11, Folios 35-40.

Taking the folios in the order in which they are catalogued, 38 and 36 run together and contain from about Book VIII, iii, 24, to *succurrendum* at the end of c.v.

37, 39, 35 are continuous in the order named. They contain from about Book VIII, vi, 13, to Book IX, i, 3, ending *centrum*.

They are written on both sides; the obverses are much worn.

Folio 40 is so much worn and is written over so badly that I was not able to decipher it; it is reserved for another reader or revision with a microscope.

But it is not a matter of great importance. The fragments belong to a very late MS. The chapters are rubricated, if we judge from the number XVIII which is found on the reverse of 38, in the same way as in the *Wratislaviensis* of Schneider. This very late MS. from Breslau, if we may judge from Schneider's

elaborate and unnecessary collation, takes nearly every opportunity of making or recording errors. And yet Schneider, p. xxxv, can say: "*conspirat is fere cum optimis quibusque libris.*" The Fragments of the Record Office and the Breslau MS. probably derive from the common source at which the special chapters were marked. And they would, in that case, ultimately derive from *G*, the eleventh century MS. at Wolfenbüttel. *G* was the only other MS. of which Schneider made use, pref. xxxv, along with its progeny at Breslau. If, as is probable, *G* is simply a revision of the ninth century Harleian 2767 *H*, then the descendants of *H*, through an uncontaminated tradition, are more reliable than the successors of *G*. When Sulpitius, from whom Schneider draws part of his material, based himself upon late MSS. resembling, if not including, the late Escorial II, 5, he was better off than any possible use of *G* could make him. For the Spanish source is in the major tradition: that which goes back to *H*. The Fragments, therefore, promise little or nothing to the criticism of Vitruvius.

Their possible place in the history of Vitruvius deserves a note. Hitherto, the only MS. in England which followed the tradition of *G*, was the Bodleian

FN.7. Were the Fragments copied from this? We cannot tell. There are, however, some superficial similarities in form. The Bodleian is about $9\frac{1}{8}$ inches by $6\frac{7}{8}$ inches. It is of parchment, with illuminated capitals and rubrication. The remains of illumination in the Fragments are very beautiful. In material, rubrication and size they are similar to the Bodleian,

except that the page seems to have been cut down in the binding of the Fragments.

That the Fragments should be drawn from the Eighth Book, which deals with water supply, and the Ninth Book, which deals with astronomy and clocks, makes us hesitate to assume a complete manuscript. At least they are worth recording.

A NOTE ON VITRUVIAN STUDIES IN ENGLAND.

It is nearly a century since, that Professor T. L. Donaldson published a paper on the MSS. of Vitruvius in the first volume of the *Transactions* (1835-'6). He drew attention to the Harleian MSS. in the British Museum, especially to No. 2767, usually symbolised as *H*. This was probably written in the eighth century at the same scriptorium as the Amiatinus MS. of the Latin Vulgate, either Jarrow or Wearmouth; it is the origin of all the other extant MSS. The claim that *G* (which is the symbol of a MS. at Wolfenbüttel) represents an independent tradition, rests on the fact that *G* attempts a revision of *H*.

Professor J. H. Middleton was responsible in 1888 for the article on Vitruvius in the *Encyclopædia Britannica* (9th edition). He credits Vitruvius with the prenomens Marcus which does not appear in the older MSS., and with a cognomen Pollio which seems to come from a misunderstanding of the Epitome of Faventinus. These mistakes have been repeated in the later editions of the *Encyclopædia* down to and including the present one. Although Rose and Müller-Strübing in 1867 published the first adequate critical edition of Vitruvius, Professor Middleton could say, "on the whole the best edition of Vitruvius's text is that edited by Schneider, Leipsic, 1807." Schneider seems to have collated only two MSS.: *G*. and the very late and the very bad MS. from Breslau, to which reference was made in the previous article. Rose collated about a dozen MSS. I have myself collated fifteen MSS.

It was not altogether a change for the better when Messrs. Teubner replaced the revised edition of Rose, published 1899, by an entirely new critical text, that of Mr. Krohn, 1912. Mr. Krohn has done good service by recording some important readings and by emphasising the pre-eminent merit of *H*. But he has demanded from his author a more Ciceronian Latinity than a working architect like Vitruvius, apparently, had time for. Unfortunately, Vitruvius's Latin offended Mr. Krohn somewhat in the description of the Basilica at Fano, and he refused to Vitruvius the credit of carrying out this work, precisely for this grammatical reason.

At this point I wish to call the attention of English students of architectural history to the fact that *there is no reason whatever for this recasting of architectural tradition*. It is a disaster that the currency of Mr. Krohn's text should have misled a generation of students. Unfortunately, Mr. Krohn received the official imprimatur of English critics without any warning about the more than doubtful character of some of his conclusions. For example, the *Classical Review*, August 1913, affirms that "Krohn proves conclusively that this chapter (Book V, i) is spurious." The only thing proved conclusively is that Mr. Krohn is not at home in the vernacular of the Roman workshop.

The same reviewer makes the rather perilous suggestion that Mr. Krohn is a cautious editor. I can only say that in my edition of Vitruvius in the Loeb Series (now in the press) I have not been able to adopt more than half-dozen of Mr. Krohn's suggestions in the first five books, out of several hundred alterations! Hence the effect of Mr. Krohn's edition has not been confined to the tradition of the Basilica at Fano. He has, later on, distorted Vitruvius's classical passage about the perspective of stage scenery. Consequently, Mr. Six, in his fascinating paper upon the painter Agatharchus at Athens, misses a point in his own favour (*Journal of Hellenic Studies*, XL, 151). For Democritus, things and their images were alike uncertain: *de incerta re incertæ imagines*, Vit. VII *pref*. Krohn actually writes *de certa re certæ imagines* and loses the Greek theory of vision on which ancient cubism and other experiments in perspective were based.

And yet if it had not been for Mr. Krohn's somewhat violent treatment of the text, we should not have realised, by contrast, the peculiar excellence of *H*. With its help, I have recovered much of the technical language of the Roman craftsman. This turns out at the same time to be the Latin of the Old Latin version of the Old Testament, of which the beginnings are to be sought in the Roman synagogues. The distinguished surviving editor of the Vulgate New Testament, the Dean of Christ Church, confirms some of the analogies which can thus be traced. With the help

of the Amiatinus MS. of the Vulgate, we are enabled to interpret the famous puzzle of the Scamilli Impares. *H.* in one place gives the standard spelling, *scabilli*. This is found in Psalm 98 (99), verse 5: adorete scabillum pedum eius, "worship at His footstool." The substitution of *m* for *b* frequently occurs in early vernacular Latin.

Vitruvius, therefore, promises on reconsideration to

furnish special help in disentangling the origins of early Christian art, not only in the design of his basilica but in the peculiar and cubist perspective which was taken over by the ecclesiastical workers in fresco and mosaic. It is an impressive coincidence that two English MSS., the Vulgate Amiatinus and the Harleian Vitruvius, seem to have carried to the court of Charlemagne the Latin scriptures and the canon of Roman architecture.*

Swedish Crafts and the Machine

By LL. E. WILLIAMS [A.]

In Sweden to-day the crafts occupy a position of great importance in the life of the people, and interest in the production of artistic articles of daily use is not confined to an upper class whose demand is often capricious. The long winters, coupled with the fact that in Sweden the general standard of living is higher than elsewhere in Europe, has fostered a tradition of artistic production among a democratic people which the industrial revolution in the latter half of the nineteenth century was unable to crush. The remoteness of many parts of the country preserved them from the impact of the machine, and the traditional crafts in these districts are still vigorously practised by craftsmen whose skill has been handed down from generation to generation through many centuries. Warned by the example of more highly industrialised countries, the Swedish Sloyd Society (*Svenska Sloydforenigen*) has attempted to preserve that artistic personality necessary for the highest practice of the crafts, from the dull lifelessness of mass production. The most successful results are to be found in the glass industry, where the production of the necessary articles of everyday use is still a craft, and not a mere trade. The little factory at Orrefors, on the east coast of Southern Sweden, fell on evil days during the European War, and was purchased by a wealthy Gothenburg merchant, who called in two artists, Simon Gate and Edward Hald, to substitute artistic designs for the factory-made article. These men, whose names are now famous throughout the world, have, with the aid of the glass-blowers of Orrefors, produced a revolution in decorative glassware, for goblets, jugs, and bowls of great beauty are produced at prices within the reach of the ordinary citizen.

The Kosta Glass Works have taken up the improvement of cut glassware at their factories in South Sweden and Varmland, where the designs of Ewald Dahlskog and Edvin Öllers have a distinction of their own. These glass works abandoned the old methods, and by cutting in shallow facets, preserve the lustre and sparkle of the crystal which the old cutters had lost.

The common "soda" glass in everyday use in Sweden, which can be obtained in natural colours or in shades of brown, grey, or blue, was first developed at Sandvik, near Orrefors, and the designs of this have also been moulded by the talent of Ewald Dahlskog, at Kosta.

Another glass at present in the experimental stage is the so-called "Grail" glass, similar to the well-known Gallé product of France. The method differs from the French, as both the colours, usually a light pastel shade, and the ornamentation are added simultaneously with the blowing. These experiments, which are being carried out by Simon Gate in collaboration with Bergkvist, an experienced glassblower, and Wallman, an engraver, are an example of the close co-operation between artist and craftsman which goes to the production of the best modern work.

Swedish ceramics, with a tradition based on the eighteenth-century types, had been allowed to decline in the last century, but to-day, the factories at Roerstrad, Gustansberg, Gevle, Karlskrona and Lindköping, are again producing beautiful things for everyday use.

The oldest factory in Sweden, that at Roerstrad, has called in Edward Hald, who has been as successful here as in his designs for glassware. The typical design is one in which the pattern is focused in one place, leaving large surfaces plain as a foil to the ornament.

At Gustavsberg a new method of quick electrical firing has resulted in unusually brilliant colours, and a successful production of three different shades of blue.

Wilhelm Kooze, who is responsible for the designs, produces articles both for ordinary use and objets d'art. These latter are beautiful renderings of abstract motifs and stylised flower patterns carved out in lustre, green, enamel, and gold. For table services, on the contrary, Kooze bears in mind the mass effect of a number of plates exposed at the same time, and, therefore, the design on each separate piece is simple in the extreme.

Some of the most pleasing articles from the Gevle potteries are decorative urns and garden flower vases designed by Arthur Carlsson Percy in the grand manner of the 18th century.

In all these works the machine is the servant and not master, the artist controls the design for mass produced articles as well as for the more individual connoisseur pieces. The necessary differences in technique between articles of handcraft and articles of mass production is

* The detailed evidence for this statement was furnished by the writer in the *Journal of Theological Studies*, October, 1930, pp. 74-77.—F. G.

never confused, and to each is given its appropriate form and design.

Swedish textiles have been well-known in Europe for many years, and even in the country of their origin they occupy a unique position. Successful efforts have in recent times been made for the encouragement and marketing of the purely peasant weaving craft, with its natural range of vegetable colours. In all large towns one finds a shop or collecting centre conducted on business lines for the advantage of the weavers in the provinces. Swedish weaving is intensely local in design, and the expert can tell at once from which province any article has come; vivid blues and reds from Floda, coral and light blue from Blekinge, the animal motifs and sombre colouring from Skane. Weaving being one of the oldest of Swedish crafts, it flourishes to-day without the names of individual artists being attached to the fabrics. Every farmhouse has its loom, and every farmer's wife her book of threads and colours together with recipes for dyeing the yarn. Fortunately, the industrial revolution,

with the introduction of factory looms, was countered almost immediately by the Hemmsloyd Society, and weaving and handcrafts taught in the schools have undoubtedly prevented the designs from succumbing to the ugliness associated with mass production in other countries.

Ecclesiastical vestments are still retained in the Swedish church to a much greater extent than in other Protestant countries, and in consequence there is a field for special individualistic designs in the weaving and embroidery of chasubles, copes, and other clerical robes, founded on the exceedingly fine collection of pre-Reformation vestments still existing in the museums.

In all branches of Swedish crafts one observes two things—a firm reliance upon tradition as a foundation for new experiment, and a close co-operation between the craftsman and the manufacturer, which is made commercially possible by the discrimination of the public in the purchase of the necessary articles of everyday life.

Reviews

CIVIC PLANNING

HISTOIRE DE L'URBANISME. By *Pierre Lavedan*. *Antiquité-Moyen Age*. Paris 40.

Reviewed by H. C. HUGHES [F.].

This very interesting book is an analysis of the principles underlying group and town plans. Beginning with the earliest settlements in different parts of Europe, illustrating the processional avenues of Egypt, the circular towns of the Hittites, Celtic villages in Britain and Brittany, Greece is dealt with carefully, emphasis being laid on the narrowness of the streets and the general poverty of ideas: the chessboard plan is shown to be ancient and obvious, long before Hippodamus of Miletus attached it to his name and long after the Americans stereotyped it to their uses. The Greek cities are shown to be laid out on merely practical lines with little grouping of buildings. The agora is given in many examples in Greece so that it can be compared with the Forum in Rome and the market place or cathedral square in medieval towns; so too the approach, the meeting of streets, the use of colonnades is treated comparatively. It is when the author reaches the Middle Ages that he seems happiest, and here are the largest number of illustrations. Some are fine plates, air views of cities like Aigues Mortes and Carcassonne; some are good views of junctions of roads, approaches to cathedrals, silhouettes of hill towns and gateways. But perhaps the most valuable contribution of this book is the very large number of simplified block plans of medieval towns, grouped according, first, to their intentions, whether deliberately laid out or merely grown; then according to their general

character, whether concentric about a castle or big church, whether shaped by the course of a river or a hill, whether in the Eastern world, or France, or Germany, or England, or Spain, or Italy, many examples of every sort. In his final summary the author seeks to explain the admirable practicability and variety of the medieval towns. He rejects Sitte's belief that it was all done for æsthetic reasons, but finds in the simple response of the medieval builder to all the varying conditions of his time the standard of value and the example to set before moderns: and his many old prints show that while we often think of the walled city as a cluster of narrow streets and high tightly wedged buildings; really in the Middle Ages the walls enclosed, besides the houses, acres of green field and garden. John Speed's map of Bedford in 1611 shows in its distribution into red and green very much of the garden city of to-day. Altogether this is a very valuable book.

"METROPOLIS"

THE METROPOLIS OF TO-MORROW. By *Hugh Ferriss*. 40. New York, 1929. [Ives Washburn.] £1 15s.

Reviewed by E. MAXWELL FRY [A.].

Mr. Hugh Ferriss is well known as an architectural draughtsman of distinction who has for some years associated himself with something more interesting than the delineation of contemporary architecture, for he it was that, when zoning first appeared as a restrictive building ordinance in New York, translated the wording of law into a series of imaginative projections into the future that proved with all the dramatic force of his art

that a great opportunity had been created for American architects.

This book is divided into two portions one of which deals only with actual buildings, and the other, scarcely more unbelievable, with Mr. Ferriss's prophetic—shall I say—warnings of what the future may bring. Not that the warnings of any artist, through the medium of word, pictures or films will have very much effect upon the ultimate future of an eruption so much the subject of vast economic pressure. Skyscrapers grouped closely together will continue to be the very characteristic manifestation of modern North American civilisation.

But against this must be set the determined efforts of those forces that first brought about zoning, still further to diminish the incidence of skyscraper towers. At present zoning confines skyscrapers to certain areas, at the same time that it regulates the recession of the upward masses of each building, but these regulations have centres where all the evils of congestion are highly concentrated. A more even distribution, through which more sunlight and air will penetrate to a wider area, is aimed at by town-planning advisers, who picture a skyline nearer that of medieval Antwerp or Bologna than the piled-up masses of lower New York.

But the problem of skyscraper control is like every other form of public control. It lacks delicacy. In London every building, whatever be its position, may go up to 80 feet to the cornice, and no more. Result—a good sense of uniformity—a bad sense of dullness, unrelieved, unmodulated, not fully significant. Change it for another form of universal control and another form of universal uniformity and dullness results. Nothing, in fact, can replace the co-ordinated three-dimensional planning of the best periods of city building. Control is of the second category of order. Planning alone approaches the ideal.

Mr. Ferriss, like all who become engrossed in a problem, seeks to plan the future; but he deals in imponderables, and despite his imagination and his knowledge cannot escape from the horror that was first announced with cruel emphasis in the film *Metropolis*, the City of the Future.

PARISH CHURCHES.

THE ENGLISH PARISH CHURCH. By A. R. Powys [A.]
12mo. Lond. 1930. [Longmans, Green.] 3s. 6d.

Reviewed by F. H. MANSFORD [L.]

This little book is unlike the few others dealing with the same subject. Being almost without illustrations (there are but five), it deals little with "styles," and makes no attempt to give lists of churches displaying any special feature under discussion. From a literary point of view this is a gain. The personality of the writer can be detected, not only where reminiscences occur, but in matters concerning "restoration" and repair. The description of "Morrow Mass," held before dawn for the benefit of travelling merchants, of the village "feast" as a unifying influence in the parish, of the sound of church bells as part of a landscape, are vivid passages. The main theme is the way in which the parish church has from the

first been bound up with the secular as well as the spiritual life of the parish. Mr. Powys enumerates a great variety of purposes to which churches have been put, giving instances from documents or from evidences remaining in the structures themselves. It is fortunate that this aspect is becoming increasingly understood. Diminished congregations are finding the cost of upkeep of some large churches almost beyond their means. It may well be that the use of nave or aisles for purposes other than the services of the church may point a way towards grants for maintenance by public bodies, although Mr. Powys has not stated this.

It seems inevitable that a second edition of such a book will be called for. It is to be hoped that a few illustrations may be given, to show the development of arch mouldings, windows and screens, subjects for which words are an inadequate medium. The book makes no reference to the fabrics of churches later than the time of Laud. "The English Parish Church" in this instance excludes the Renaissance and the Revival.

PAST, PRESENT, AND FUTURE

MEN AND BUILDINGS. By John Glogau. 8o. Lond. 1931.
[Country Life.] 8s. 6d.

THE NEW WORLD ARCHITECTURE. By Sheldon Cheney.
Sm. 4o. Lond. 1930. [Longmans.] £2 2s.

To Mr. Glogau, in his well-conceived survey of the humanist values in building, the Past is a very vivid story to be dwelt on and studied with a scholarly interest in its lessons for the Present. His book is as good a comment as one could wish on the more impassioned advocacy of Modern work to be found in *The New World Architecture* by Mr. Cheney. Mr. Cheney is an American with a sort of historical Monroe doctrine in his philosophy. The Past, he regrets to say, has existed, but it is to be treated as a slightly improper indiscretion, and passed by as quickly as may be. There are moments when Mr. Cheney's book raises the most violent flights of indignation at its unreason and caprice—moments when we are aware that Mr. Cheney is one of the seven righteous men who have escaped the flood, when he stands a proud Noah on his little Ararat waving enthusiastic arms over a deluged earth in time with a *te deum* composed by Frank Lloyd Wright and Le Corbusier. Mr. Cheney is in fact a cock-sure modernist with a fine stock of material to prove his case, which, after all, is a very good one. It is his own rather arrogant intolerance that makes the reader feel that such bluster must be blind.

No one wants to quarrel with Mr. Cheney in his admiration of Frank Lloyd Wright or Saarinen or Sullivan, but it is possible to allow the reason and beauty of their works without anathematising the whole of the Renaissance and dismissing Byzantine architecture in a phrase or two as "like the minor visual arts that contributed so much to its charm . . . too colourful, too iridescent, too pretty to be structurally important." In a phrase he admits Michelangelo to his temple, which seems inconsistent—perhaps when he learns of the Laurentian library stair Michelangelo will be put out.

Yet, though Mr. Cheney is intolerant and blind to much of the best in the historic styles, he is eminently reasonable in his analysis of the moderns, though not always discerning in his differentiation of cliché from principle. He points out that stark functionalism is only, as it were, a stripping for the fray, and that the real test of modern theories comes when the "fitness" implied in functionalism is made to include more than practical efficiency for a material purpose:—to include fitness for a purpose higher than use, embodying a spiritual idea, that is, an idea springing from "The spirit of man," and not the efficiency of the machine alone. "To-day there are few people who have a definite goal for their spiritual aims, and whose work is a benign reflection of those spiritual aims," says Mr. Gloag, and in Mr. Cheney's words "most people do not see big enough," and "let Art be an intensification of life." As long as functionalism remains the chief *raison d'être* this "new architecture" will be parched and wearisome. It is in the various schools, so well illustrated by Mr. Cheney, led by Mendelsohn, Behrens and Hoffmann, by Saarinen, Sullivan and Lloyd Wright and Ostberg and Asplund that coherence and a rich future lies, because we can see in them an acceptance of an architectural principle that recognises the spiritual power of architectural form. The functionalists, while they recognise the rational merits of Chartres or the Parthenon, blind themselves to the spiritual impulse that is the rock bottom of the whole achievement, and is exactly similar to the impulse that directed the design of the Baths of Diocletian, to take one of Mr. Cheney's dislikes—largely, we suspect, because of the Pennsylvania Station; or the Pantheon or St. Peter's or St. Paul's. The vaporous tenebrosities of le Corbusier know next to nothing of these things and Corbusier's copyists less. The lack of an historical sense betrays Mr. Cheney

into such statements as this: "There is a group of moderns who find the key of architectural design in a conception of *space enclosed*, rather than of material mass with its secondary emphasis on walls"—Oh, this group of highly original moderns!—what about Hagia Sophia, those Roman Baths, that Renaissance Palace, this Georgian House? Mr. Cheney seems not to realise that "spatial quality" has been probably the first impulse in architecture from the days when the second savage scooped out his cave a bit more to make it spatially grander than the first savage's cave.

But, despite these points which we criticise, Mr. Cheney's book is excellent reading, and a salutary pill for any of us who find many of the moderns hard to digest.

Mr. Gloag's book, we have said, is an excellent comment on *The New World Architecture*, partly because he is, if anything, unduly intolerant of the modern schools, and has many hard words to say about those whom Mr. Cheney praises most. He represents fairly, however, the attitude of the medium advanced opinion in England, which seems more concerned with avoiding the ills of the last 50 years and saving England from itself than directing opinion to the new powers that are so actively awake elsewhere. Ruskin and Corbusier are his two arch fiends, but all that is really incidental to his theme, which is an admirably designed if slightly heavy handed study of the manner in which "the past men have turned building materials in Britain into the living history that is architecture." If his book is studied by architects, and given by architects to their lay friends when a birthday occasion allows, the potencies of the New World Architecture will have more chance of reasonable application in this country.

E. J. C.

Correspondence

ARCHITECTS' REGISTRATION BILL.

Board of Architectural Education,
23 March 1931

To the Editor, JOURNAL R.I.B.A.,—

SIR,—To anyone having a genuine acquaintance with the work of the Board of Architectural Education, and who can regard the Board itself without malice, Mr. Spencer's letter in the issue of *The Builder* for 20 March will merely be an illustration of the unfortunate bias which appears to afflict his mind whenever he thinks of any of the doings of the R.I.B.A.

If Mr. Spencer will not believe anyone connected with the R.I.B.A., perhaps he will believe Mr. F. S. Orme, who is the representative of the Incorporated Association of Head Masters on the Board of Architectural Education. Mr. Orme sets out the position clearly in his admirable letter to *The Builder* of 20 March.

Were it not that to some others, perhaps as well as himself, Mr. Spencer's letter might appear unanswerable, it would scarcely merit even this amount of reply.

From some cause beyond fathom, Mr. Spencer looks on every action of the Board as incapable of having anything but evil, illicit and impure motives, and consequently any stick, however out of date, is good enough to use against his Machiavellian *bête noire*, the R.I.B.A.

It hardly needs stating that were the Board so really evil as Mr. Spencer imagines there are few, if any, members of it who would have anything further to do with it. In Mr. Spencer's present state of mind however, he will probably disagree that there is any integrity among us.

Until such time as Mr. Spencer regains a little balance of fair-mindedness in his outlook, it seems hardly worth while to treat him as seriously as one

would a less biased person. His views will remain an obsession whatever one says, however truthfully.

At the same time, it is gratifying to know, as there is reason for knowing, that Mr. Spencer's views are not necessarily those of his Institute as a whole.

Goodwill is intangible but an asset.—I am, yours faithfully,

L. SYLVESTER SULLIVAN,
Chairman,
Board of Architectural Education.

Board of Architectural Education,
24 March, 1931.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—We do not propose to enter into controversy with Mr. Spencer, whose misstatements have been faithfully dealt with by the Chairman of the Board of Architectural Education and by the representative of the Incorporated Association of Head Masters on the Board.

But there is an undercurrent of insinuation running through Mr. Spencer's letters which, so far as any meaning at all can be extracted from the cloud of words in which he wraps up his message, appears to amount to something like this—that the Board of Architectural Education has entered into a plot with the R.I.B.A. to force or entice students into membership of the R.I.B.A., and that its activities, whether owing to this plot or accidentally, have in some way become a menace to the building industries of the country.

Against this, as the surviving Past Chairmen of the Board of Architectural Education who have held office since the war, we desire to protest. To our knowledge, during the whole of that time the entire energies of the Board have been directed to improving the education of architects in this country and overseas, and to no other end whatever. No suggestion has ever been conveyed to the Board, whether publicly by the Council of the R.I.B.A., or privately through any other channel, that the Board should work for any other purpose or tendency. Whether its efforts have been successful we may leave others to decide, but that the education of architects has been and is the sole business of the Board of Architectural Education is matter of fact and cannot be gainsaid.

Mr. Spencer holds it up against "the promoters" that when the Bill was drafted they looked round for a suitable instrument, which they "happened upon" in the Board of Architectural Education. There was no need to look round for a suitable instrument. It already existed in the Board of Architectural Education, the only body in the country with experience in the administration of architectural education, and fully representative of all interests concerned, including

Mr. Spencer's own Institute. Mr. Spencer's plot has never existed.

Nor even accidentally has the work of the Board been a menace to the building industries of the country. Any reasonable builder would find it to his interest to deal with trained rather than with untrained architects.

If the Board's activities were as sinister as Mr. Spencer claims, it was open to the representatives of the Institute of Builders to reveal and denounce them in the Board, the Council of the R.I.B.A., and the Press. None of these steps has ever been taken.—Yours faithfully,

Chairman 1921 to 1925 W. CURTIS GREEN.

Chairman 1925 to 1927 MAURICE E. WEBB.

Chairman 1927 to 1929 HENRY M. FLETCHER.

VALUATION OF DAMAGES IN ANCIENT LIGHT DISPUTES.

13 March 1931.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—The author of the above article has considered it necessary to preface it with his correction of the published history of daylight research in this country.

It is always desirable that the exposure of popular fallacies should itself be correct, especially when personal references are made; for the object of the latter cannot afford to ignore them, at least in the columns of this JOURNAL, without implying tacit assent.

Happily the author's historical summary calls for only a brief reply.

Reference to the published proceedings of the Royal Institute, to which possibly the author has not access, shows that when the late Prof. Kerr introduced, in a paper read before the Institute in 1865, his attempt to provide a system of predetermining daylight illumination, it evoked strong criticism. Had that system (which is totally different, both in principle and detail, to the modern methods referred to by Mr. Ackermann) been in any sense accurate, or, as he states, "rational," somebody at least would have made some use of it in the ensuing 65 years. Mr. A. P. Trotter, who has persistently belittled the invaluable assistance which he freely afforded to me in 1907-8, would, I am sure, be the last to assent to Mr. Ackermann's claim that he "devised the cill ratio in 1896." Mr. Ackermann probably has in mind either the roof ratio or the zenith ratio which Trotter and I devised in 1908.

The cill ratio was evolved at a meeting in 1913 when Dr. Nash, Mr. J. S. Dow and I were measuring daylight in a school in Wimbledon. If I remember rightly the first suggestion came from the fertile brain of Dow, who, with Mackinney, invented the Lumeter photometer.

The statement that Maréchal plotted contoured plans in 1896 is misleading. Maréchal's contoured plans related to artificial illumination. Daylight had not been measured in 1896. The first application of contoured plans to daylight was made in the witness box in the well-known Slack case in 1923, in the form of a sketch to

elucidate an intricate point. Since then they have been used continuously.

But the statement in the author's historical summary to which it is particularly necessary to take exception is the passage "Several others have worked at and improved the methods since (1896) but it was not until Mr. P. J. Waldram introduced the method (still further improved by his son) to the Court in *Semon v. Bradford Corporation* (1922) that the modern system began to be used regularly." Who the "several others" were, what they discovered prior to 1922 and where they published their achievements is not stated. It would be interesting to learn.

Surely it is inconceivable that a High Court Judgment would have laid down, as in *Semon*, specific standards of good and of adequate daylight, standards which have been approved and applied in every subsequent case, including cases in the Court of Appeal, unless those standards and the methods by which they had been arrived at had not already survived application in the Courts in many cases over several years, had been tested by cross-examination when applied to different cases, and been substantiated by records in Government Reports. One of such reports, published in 1914, and now out of print, is actually quoted in the *Semon* Judgment.

The modern system was first "introduced to the Courts" by a junior barrister who has now been a judge for some years. It was even then already sufficiently well known to be substantiated by some pages of statistical measurements in the Reports to Parliament of H.M. Chief Inspector of Factories for two successive years.

The labour-saving diagram devised by my son and myself to which Mr. Ackermann refers was not evolved until 1923.

With regard to the subject matter of the article, most people have been intrigued at some time or other with the idea of finding a universal mathematical formula with which to calculate damages in light disputes. Sooner rather than later they have discarded it in favour of the simple common sense practice of the Judges of treating each case on its merits.

One does not like to think that anything is impossible, but the author's attempt is based upon two assumptions which are not proved.

(1) That the Courts have held that the reduction of light to below the legal minimum over 50 per cent. of the area of any room gives no cause of action.

(2) That the rental value of such portions of any room as are below the legal limit of adequate light is less than the rental value of those portions which are above that limit by some exact proportion—the author suggests 70 per cent.

The short answer to (1) is that the Courts have never made such a rule and are never likely to. They certainly do refuse, and rightly refuse, to grant any relief, monetary or otherwise, in cases where this injury is not sufficient to cause any reduction of the normal rental value which the premises would command if adequately lit in the opinion of reasonable prospective lessees.

It is a well-known fact that it is possible to reduce the light over 50 per cent. of the area of some rooms at some levels without affecting their rental value. Owing to the

fact that modern methods enable the facts, *qua* light, to be ascertained readily, very few cases now come into Court unless one or both of the parties be badly advised. Mr. Ackermann has apparently deduced a rigid legal rule from the actions which he has heard argued and decided in the Courts since his first case in 1927.

With regard to (2), intending lessees do not appraise the rental of an office by measuring the area over which the light is below the legal minimum and applying, consciously or unconsciously, any particular discount to that area. Certainly they do not discount all such areas by 70 per cent. They consider the room as a whole.

The Practice Standing Committee recently issued a reprint from the Journal of, *inter alia*, certain judicial criticisms of evidence by Mr. Ackermann in 1929 to the effect that the legal minimum of adequate daylight (0.4 per cent. cill ratio) was far too high, according to his reading of the average of N.P.L. records. Mr. Ackermann now suggests that by the time that the light over any floor area is reduced to 0.4 per cent. cill ratio, the rental value of that area will have been reduced by 70 per cent. on account of insufficient light.

As against such a complete *volte face* in two years the legal standard has remained absolutely unchanged since it was suggested with the first published records of zenith ratios 22 years ago.

The large differences of opinion as to appropriate damages in ancient light cases are not necessarily due to the incompetence of valuers. Often they result from the practice of computing damage, on the one hand, by calculating the real damage caused, and, on the other hand, by estimating what it would be worth to the building owner to buy off the real or imaginary right of some neighbour.—Yours faithfully,

PERCY J. WALDRAM.

39 Maddox Street,
London, W.1.
27 March 1931.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—I have read Mr. A. S. E. Ackermann's communication on this subject with much interest, partly owing to the subject being one that has occupied my closest attention for many years, and partly because I have already endeavoured to record my own methods of assessing compensation in such cases, in a book which, I understand, is now in the hands of most architects and surveyors who specialise in this kind of work. I refer to *Easements of Light*, published by Messrs. Batsford and The Wykeham Press.

In my book, I referred to two courses of procedure in assessing compensation, after the Daylight Plans, representing the original and ultimate conditions of natural lighting had been prepared, by methods which I described. One of these courses I described as the Flat Rate Method, and the other as the Progressive Rate Method. Both of these methods have been used by me in the assessment of compensation in a considerable number of cases, both in London and in the provinces. I was interested to observe whether Mr. Ackermann wished to advocate an entirely new method, devised by himself. This I found was not the case. The procedure he recom-

mends is the Flat Rate Method, applied to the front half of the room, adjacent to the windows, and not to the whole of the apartment. He always assumes, in the calculations, that the dark area is worth 30 per cent. of the light area, and that compensation is not paid in respect of any infringement of light in the back half of the room. In a similar way, I assumed that, in the worst case (No. 10 in Fig. 109 of my book), the injury would not exceed 33½ per cent. This was, however, only a hypothetical case, as there can be no doubt that this percentage varies for different classes of property and for different localities.

In some respects, I prefer the Progressive Rate Method illustrated in Figs. 109 and 109a of my book. In this method, a gradual increase of rental value towards the window, in arithmetical progression, is assumed. Diagrams 41 to 45 in Fig. 109a relate to the 50 per cent. original depreciation cases, which are equivalent to the legal position, as regards compensation, which Mr. Ackermann has assumed. It will be seen that, on the hypothetical basis adopted, the percentages of depreciation of rental value, over the entire floor area, not per square foot of dark area only, vary from 3'6 per cent. to 24'2 per cent. Procedure on these lines is perfectly logical, but it is not so easy to adopt "in the case of rooms, in which the Line of Inadequacy passes from close to the window to a considerable distance into the room, owing to the access of appreciable amounts of lateral light." (Vide page 136 of my book.) It is in cases of this kind that the less logical Flat Rate has an advantage, from the point of view of saving labour and ensuring expedition.

Some of the leaders at the Chancery Bar, who have had special experience in Easement of Light cases, would, I venture to think, not be prepared to agree that the law in such cases is now so clearly defined that it is possible to say, with assurance, that compensation cannot be obtained in respect of the part of an infringement of easements of light, which occurs beyond the front half of a room. I have been present at many conferences with leading counsel, regarding Ancient Light cases, and they have frequently been pressed to express their views regarding this very point; but I have invariably found them particularly guarded in their remarks and quite unwilling to commit themselves definitely on this point. In order to assist defendants, counsel not infrequently submit that the owners and occupiers of the dominant tenements are only entitled to a reasonable amount of light, and cite the case of *Colls v. Home and Colonial Stores*, etc. They also suggest sometimes that it might not be unreasonable to assume that a forty-five degree obstruction, measured from the sill of the window, would not intercept more than a non-actionable amount of light, or to assume that good light, at table level, extending into the middle of a room, is the most that owners and tenants can expect to continue to enjoy, without interruption. In certain cases, the judgments indicate the acceptance of one of these submissions, but neither of them has been accepted a rule of the Court. That I think is abundantly clear. Often the main thing that the Judge wishes to know appears to be whether it can be proved that an actual loss of rent per annum has occurred. If it can be proved, this seems to be generally sufficient. It is not customary to ignore the value of definite evidence of that kind, on the ground that the change in lighting conditions occurs mainly in the

back part of the room, and that, consequently, in respect of the part behind the centre line, there is no remedy. In the case of *Ecclesiastical Commissioners v. Kino*, the so-called forty-five degree rule came under consideration and Lord Justice James said:—"The fact that forty-five degrees of light are left is only an element in the case. It may be used as a sort of test in the absence of any other mode of arriving at a conclusion; but there is no rule of law, no rule of evidence, and no presumption, except of the very slightest kind, that where the angular height of an erection is less than fort-five degrees, the access of light is not substantially interfered with." In *Parker v. First Avenue Hotel Company*, the Court of Appeal modified the form of an injunction, in such a way as to disregard the alleged rule. I venture to think that any efforts to establish a legal rule to the effect that actionable nuisance in respect of infringement of Easements of Light cannot be created in the back part of a room, behind the centre line, as Mr. Ackermann suggests, would not meet with any more success. Much must depend upon the circumstances, as, for example, the dimensions of the rooms of the dominant tenements. It would not be fair to treat a room 10 feet deep from back to front, in the same way as one 20 feet deep. Halfway back, in one case, would only be a matter of 5 feet from the window; whilst, in the other case, it would be 10 feet. Then there is the case of the large room, two storeys high, with lofty windows.

I do not wish it to be thought that I consider that there is not an appreciable difference between damage and actionable damage. There undoubtedly is, but it seems to me that the legal position is not so clearly defined, as to make it possible to assume, in all cases, that the difference between the two can be ascertained by the simple operation of drawing a line through the centre of a room, and separating the front half from the back.

It seems to me that the use of algebraic formulae, in connection with simple arithmetical calculations of this kind, is liable to create the impression that the value of daylight can be computed with as much certainty as the Modulus of Inertia of a steel girder. That, as we all know, is far from being the case. A number of variable factors have to be taken into consideration. Although I believe that the article of Mr. Ackermann only relates to a very limited part of the cases that have to be considered, I consider that he has rendered a useful service by giving some hypothetical examples of one of the ways in which the Flat Rate Method can be applied. I think, however, that it should be pointed out that no methods can enable reliable estimates to be prepared, without some special knowledge of the valuation of property.

There is an initial difficulty in adopting any modern method of computing compensation, to which Mr. Ackermann has not alluded. I refer to the expense that so often occurs in producing accurately the whole of the projections, on which Daylight Plans are based. These projections are the diagrams known as Sky Projections and Calculating Sheets for measuring light in both the horizontal and vertical planes. The preparation of these projections is sometimes a tedious and lengthy operation, owing to the difficulty of obtaining the necessary data. In some instances, the forms of the window openings and the shapes of the obstructing buildings are so simple that the projections can be made with rapidity and a minimum

amount of expense. There are, however, other cases in which the light is not derived from one but from a series of small patches of sky, illuminating the room from quite a number of windows. Moreover, it also often happens that the obstructing buildings are not regular in form, having complicated skylines, in a variety of receding planes. Some may possibly be at a very considerable distance, and on the property of parties in no way concerned in the issue. Not infrequently the obstructing buildings are neither parallel nor at right angles with the walls of the rooms under consideration, lying at a variety of irregular angles. The levels on which the obstructing buildings stand sometimes vary considerably. In order to prepare really accurate projections in cases of this kind, it is occasionally necessary to have an extensive survey made of surrounding property, and to obtain elevations and roof plans of a number of buildings in the vicinity. There are cases in which the expense incurred by proceeding in this way is altogether out of proportion to the amount of the claim. Even in cases in which the claim is in respect of a substantial amount, it has been quite obvious that some effort ought to be made, in order to reduce the initial expenditure of making the projections with scientific accuracy. In certain cases, specialists have endeavoured to overcome the difficulty by means of approximation; and, in a comparatively recent case in Court, it was stated that in making the projections an average line had been assumed, owing to the impossibility of accurately dealing with such complicated obstructions.

In order to avoid unnecessary expense and loss of time in dealing with existing conditions, I have devised a Day-light Factor Theodolite. By means of this instrument, it is possible to ascertain with scientific accuracy the day-light factor at any particular point, in respect of light derived from any number of windows, however complicated the external obstructions may be. Records are obtained photographically, by means of a small camera at the top of the instrument, which has been so designed as to radiate about a fixed point in both the horizontal and vertical planes. In order to obtain the data required from the photographs, it is necessary to use angular grilles or webs. This instrument has already been examined by a member of the Illumination Branch of the staff at the National Physical Laboratory, at Teddington; and is, I understand, regarded as having been designed correctly for the purpose.—Yours faithfully,

JOHN SWARBICK.

107 Jermyn Street,
St. James's, S.W.1.
26 March 1931.

To the Editor, JOURNAL R.I.B.A.,—

DEAR SIR,—The article by Mr. A. S. E. Ackermann, published in the R.I.B.A. JOURNAL of 21 March 1931, upon "Valuation of Damage to Ancient Lights," is an interesting endeavour to limit difference of opinion amongst experts on this very important matter. Mr. Ackermann has evolved a very ingenious system of valuation, and bases his entire system upon two axioms: (1) that "it is not, as a rule, difficult to obtain the cost per square foot per annum of an office, shop, warehouse or

room in any given neighbourhood," and (2) that "if a room is left with not less than half its area suitably lighted for the ordinary purposes of life or business, then . . . no injunction or damages will be awarded."

These two axioms appear to be somewhat debatable. The cost per square foot of a room obtained from "the tenant of the premises affected" is not necessarily a guide to the reduced value of the room as a whole if it be deprived of any serious quantum of adequate light, because the conditions under which the room can be used are changed, and my experience has been that the wide differences of opinion that arise are primarily due to this fact being overlooked.

With regard to Mr. Ackermann's statement that "if a room is left with not less than half of its area suitably lighted for the ordinary purposes of life or business, then . . . no injunction or damages will be awarded," it is difficult to reconcile this statement with one of the decisions of the *Colls v. Home and Colonial* case, which was: "The diminution of light necessary to support an action must be such that the diminution amounts to a nuisance; the fact that the original amount of light is reduced will not support an action; there must be substantial deprivation, so as to render occupation 'uncomfortable' according to the ordinary notions of mankind, or so as to interfere with the 'beneficent use and occupation' of a business premises." If Mr. Ackermann be correct, the loss of 50 per cent. of adequately lighted space to a room adequately lighted over its whole area could never be regarded either as a "nuisance" or as rendering "occupation 'uncomfortable' according to the ordinary uses of mankind," or as interfering "with the 'beneficent use' of a business premises," which, as Euclid said, is absurd. From another point of view, if two rooms side by side of equal width having windows of the same area are considered, room A, 10 feet deep, and room B, 18 feet deep, and both adequately lighted for 9 feet back from the windows, then, if both rooms are equally obstructed so that they lose a band of adequate light 4 feet deep, according to Mr. Ackermann an action would lie in the case of room B; but not in the case of room A, although the damage would be greater to the smaller room than to the larger room B. This axiom may apply in some cases, but it cannot apply in all.

Therefore, whilst I am most interested in Mr. Ackermann's endeavour to solve this problem, the solution of which would be of the greatest benefit to our profession, I could not use a system the basic axioms of which are so debatable.

I think that the problem should be approached in this manner:—

The rentable value of a room is the value of those parts of it that can be used with comfort for the purposes of which it is adapted, and the loss of any of the parts that can be so used creates actual damage. But it is not necessary for the whole of a room to be adequately lighted, and actionable damage is created by the substantial deprivation by the obstruction of ancient lights of any of those parts that the normal purposes of mankind would require to be adequately lighted, and which did in fact enjoy adequate light before the erection of the servient building.

Therefore, each room must be considered on its merits, and the problem is to value the loss of an area that would require adequate light for the ordinary use of mankind, irrespective of what percentage that area may be of the whole room, and I suggest that this can only be done by valuing the loss to the whole room of the particular amenity which the position of the light lost renders uncomfortable. If, for example, an office accommodated four clerks, and had a rental value of £100 per annum, and was obstructed so that it lost sufficient adequately lighted space to deprive one clerk of working space, the loss might be 25 per cent. of its total value, or £25 p.a., even though the loss in square feet might be only 5 per cent. of the total area of the room. Alternately, the loss of 50 feet of adequately lighted space in parts of the room in positions where it could not be made use of for office purposes, such as behind doors or next to the fireplace, might not cause any loss in value at all. Therefore, I do not see how it is possible to arrive at fair and reasonable values of damage by any system which deals with percentages of floor area, and whilst I should very much like to be able to use some fool-proof algebraical formula which would reduce the whole problem to simple mathematics, I am unable to find any solution other than sound reasoning based upon expert knowledge of the values of space per foot per annum. It will be said that this still leaves the door open for considerable differences in opinions, but my experience is that the Courts and Arbitrators, if supplied with

proper cartoon plans, very soon appreciate values based upon logical argument and decide accordingly.

There are cases in which any system based upon values of percentages of floor areas would not be applicable, such as the site value in *Griffith v. Clay* (1912). Whichever way this problem is considered one is brought back to the conclusion that each individual case must be considered on its merits, and the manner of valuing the light of which a room is deprived by the erection of a servient building must be by an expert having an intimate knowledge of the value of room-space applying that knowledge to the loss of amenity disclosed by the contour lines on a daylight plan, having regard to the use of the room.

Mr. Ackermann mentions that the system he has evolved is chiefly applicable to cases that come within the "good working rule" of the *Shelfer* case, with regard to the damage being small and assessable. But can a loss of 70 per cent. of rental value per square foot be regarded as small? Also, floor space damaged to that extent would surely have lost its market, and loss of market is not assessable. If we regard every square foot of floor space reduced to or below 0.4 per cent. cill ratio as having lost 70 per cent. of its rental value, very few cases will fall within the *Shelfer* definition, and injunctions would then be the rule rather than, as at present, the exception. —Yours faithfully,

PERCY V. BURNETT.

ORDNANCE LEVELS.

The following questionnaire is printed at the request of the Ordnance Survey Office.

1. Are you aware of any areas in England, Wales or Scotland in which, from your experience, you have found that the published levels of the old (Liverpool) datum on the large scale Ordnance maps are no longer, for any reason, of the accuracy you require, or are likely to require?
2. If so, what is the maximum amount by which the observed height of a bench mark has been found to vary from the height shown on the Ordnance Survey Plan?
3. Are there any areas where the number of existing bench marks has been found to be insufficient?

Replies should be addressed to the Hon. Secretary, Science Standing Committee R.I.B.A., 9 Conduit Street, W.1. It is hoped that there will be a big response to this questionnaire, and "nil" returns are particularly desired.

R.I.B.A. PRIZES AND STUDENTSHIPS, 1931-1932.

This pamphlet is published annually by the Architectural Board of Education to give full information about the various prizes and studentships and whenever

possible the detailed programmes of the competitions. Copies can be obtained at the Royal Institute of British Architects, price 1s. exclusive of postage.

GARDEN CITIES AND TOWN PLANNING INSTITUTE HOUSING TOUR No. 12

The twelfth tour of the Garden Cities and Town Planning Association will be held on 22 and 23 April, when visits will be made to the housing schemes of a number of public utility companies in London.

For several years public utility societies have been increasing in number and importance. Many have been formed in connection with churches and social settlements, some by business organisations. In all cases they endeavour to cater for that section of the community which has not yet been brought into reach of municipal houses. The aim of these societies is to rehouse tenants in improved surroundings at low rents.

The inclusive cost of the tour, with lunch on both days, is £1 5s.

MR. W. J. WALKER TODD.

Mr. W. J. Walker Todd, member of the Edinburgh Architectural Association, has been elected an Associate of the Royal Scottish Academy.

Obituary

JAMES HENRY MARTINDALE [F.]

The death occurred on 17 March, at his home Moor Yeat, Wetheral, of Mr. J. H. Martindale, F.R.I.B.A., who had been in failing health for some time.

Mr. Martindale was born in Chester in 1855; articled to the late Mr. Daniel Brade, F.R.I.B.A., and was for several years assistant to the late Mr. George Corson of Leeds. He went to Carlisle as chief assistant to the late Mr. C. J. Ferguson, F.S.A. Subsequently he commenced practice on his own account and attained a wide reputation. At the age of 20 he won the first prize of the Architectural Association of Ireland for a town church. He was a member of the Council of the R.I.B.A. and was elected Chairman of the Cumberland Branch of the Northern Architectural Association, and their representative on the Allied Societies Conference. For some years he was President of the Northern Architectural Association.

Mr. Martindale specialised in church work and for a great many years held the offices of Cathedral and Diocesan Surveyor. He designed churches at Corbridge, Cleator, Maryport, Arlecdon, Holme Cultram and Kingstown, as well as many stained glass windows. In addition to his ecclesiastical work he carried out much important work to country mansions. His own offices were specially designed by him, and were

so placed that they commanded an uninterrupted view of the magnificent East window of the Cathedral.

He was a Fellow of the Society of Antiquaries, a member of the Council of the Cumberland and Westmorland Antiquarian Society and acted as chief correspondent for the area for the Ancient Monuments Board. He was an authority on the Roman history of Carlisle and was a co-opted member of the Library and Museum Committee of the Carlisle City Council.

The practice will be carried on by his son, Mr. C. J. Fawcett Martindale, A.R.I.B.A.

FREDERICK EDWARD FELLOWES BAILEY [F.]

The death occurred on 15 March of Mr. F. E. F. Bailey, F.R.I.B.A., formerly of Kingscourt, Walsall.

He was born at Tipton, Staffordshire, in 1852, articled to the late Mr. E. Pincher, West Bromwich, and commenced practice about 1875 at Walsall. He was elected Associate of the Institute in 1879, and Fellow in 1905. In 1892 he entered into partnership with the late Mr. H. H. McConnal [F.], which continued until the latter's death in 1908. Mr. Bailey retired in 1924. His practice was considerable, including schools, technical colleges, hospitals and other public buildings, business premises and domestic work.

He served on the Town Council for a number of years, and was an ardent Freemason, being Master of St. Matthew's Lodge in 1887, and receiving Provincial Honours in 1889.

Allied Societies

(The attention of Members of the Allied Societies is particularly called to these pages)

LIVERPOOL ARCHITECTURAL SOCIETY.

The annual dinner of the Liverpool Architectural Society was held in the Adelphi Hotel, Liverpool, on Wednesday, 18 March.

Dr. Raymond Unwin, Vice-President R.I.B.A., said that a great deal of trouble to-day is due to lack of planning, and it is time the profession made an effort to bring together the good things that they can give through their detachment and their faculty for design, and their æsthetic judgment. We must co-ordinate the design of buildings in our towns and must realise that a city is a unity to be studied as a whole. Dr. Unwin said that Professor Abercrombie, the President of the Society, was rapidly becoming a national figure, and his work for the preservation of England was putting us greatly in his debt. He praised Liverpool for its ring paths for pedestrians, and ring roads for motorists, and for encouraging satellite towns. He warned architects not to ignore the accumulated beauty of our thousand years old development, and said he was afraid of turning experimenters loose for fear they break something worth more than their experiments.

Professor Abercrombie endorsed these remarks and added: "The word 'functionalism' is often on our lips to-day, but I think there is something more in architecture than the mere function of building. Our job is not to study the precise minimum niceties. If that were so we should not be building two cathedrals simultaneously. If you think a building must be just a utilitarian box, there is always the danger that someone will come along and want to add some architectural frills, and then you will have trimmings scratched on instead of inherent beauty. This Society is primarily out to secure beauty for the city and is prepared to sacrifice all material gain to improve the appearance of the streets and surrounding country." The Lord Mayor thought architects should sign their work. If every building bore the name of its architect there would probably be

a tremendous improvement. The designers of beautiful buildings go about unrecognised and the bad ones in no danger of their lives—which is manifestly unfair.

Mr. F. J. Marquis, chairman of the Liverpool Organisation, remarked that if we were to have satellite towns we must encourage the youth movement in industry. Young people and new firms must be helped to get a footing, and only in this way could one check the deplorable tendency for new industries to settle round London.

Dr. Downey advocated closer contact between architects and clerics, and said how in conjunction with Professor Reilly he had started a course of architectural lectures at Upholland.

GLOUCESTERSHIRE ARCHITECTURAL ASSOCIATION

A very successful meeting was held on Wednesday evening, 18 March, at Urch's Restaurant, Gloucester, preceded by a dinner, which was attended by a number of members and guests.

The meeting took the form of a mock arbitration, to consider claims arising out of a building contract in connection with the substitution of stone dressings in place of artificial stone, and damage caused by a falling scaffold pole to new shop windows being fixed by sub-contractors.

Sir Philip Stott, Bart. (Hon. A.R.I.B.A.) acted as arbitrator; Mr. C. W. Yates, A.R.I.B.A., F.S.I., as architect; Messrs. Percy C. Lloyd and Humphrey K. C. Ward as counsel for the defendants and plaintiffs respectively; Mr. Sylvester Taylor as quantity surveyor; Mr. R. A. Berkeley as builder; and Mr. Frank Parsons as foreman.

The evidence in the case gave rise to much amusement, and full advantage of such opportunities was taken by the arbitrator and others taking part.

Notices

THE ELEVENTH GENERAL MEETING.

The Eleventh General Meeting of the Session 1930-31 will be held on Monday, 13 April 1931, at 8 p.m., for the following purposes:—

To read the Minutes of the General Meeting held on Monday, 16 March 1931; formally to admit members attending for the first time since their election.

To read the following Paper: "Modern Flats," by Mr. G. Grey Wornum [F.].

R.I.B.A. ANNUAL DINNER, 1931.

The Annual Dinner will take place on Thursday, 21 May 1931, in the Hall of Lincoln's Inn (by kind permission of the Benchers of Lincoln's Inn). Full particulars will be issued to members in due course.

THE ARCHITECTS' CONFERENCE, DUBLIN.

17-20 JUNE 1931.

The Annual Conference of the Royal Institute of British Architects and its Allied Societies will take place at Dublin from 17 to 20 June 1931. The Royal Institute of the Architects of Ireland have in hand the preparation of a most attractive programme, and particulars will be issued in due course.

All members and students of the R.I.B.A. and all members of the Allied Societies, the Architectural Association, and the Association of Architects Surveyors and Technical Assistants, are cordially invited to attend the Conference.

It is expected that there will be a large attendance of members from all parts of the country, and they are urgently requested to arrange for their hotel accommodation at the earliest possible dates so as to avoid the risk of disappointment. When communicating with Dublin hotels, please mention R.I.B.A. Conference, as a number of rooms have been specially reserved for members.

The Executive Committee of the Conference have kindly furnished the following list of hotels, with charges:—

	Bed and Breakfast per day.	Full Board.
Shelbourne Hotel ..	15/-	24/-
Royal Hibernian Hotel ..	12/6	22/6
Salthill Hotel, Monkstown ..	12/6	22/6
Gresham Hotel ..	11/6	22/6
Jury's or Moira Hotels ..	10/6	18/-
Standard Hotel ..	11/6	16/6
Central Hotel ..	9/-	16/6
Wynn's Hotel ..	8/6	15/6
Ivanhoe Hotel ..	8/-	14/-
Grosvenor Hotel ..	8/6	13/6
County Hotel ..	8/6	12/6

MEMBERSHIP OF THE R.I.B.A.

THE LICENTIATE CLASS.

The revised Bye-laws of the Royal Institute of British Architects have received the approval of His Majesty's Privy Council and applications may now be sent in for

membership of the R.I.B.A. in the Licentiate Class. Full information and the necessary forms will be sent on application being made to the Secretary R.I.B.A., 9 Conduit Street, London, W.1.

ASSOCIATES AND THE FELLOWSHIP.

Associates who are eligible and desirous of transferring to the Fellowship are reminded that if they wish to take advantage of the election to take place on 15 June 1931, they should send the necessary nomination forms to the Secretary R.I.B.A. not later than Saturday, 18 April 1931.

LICENTIATES AND THE FELLOWSHIP.

The attention of Licentiates is called to the provisions of Section IV, Clause 4 (b) and (ciii), of the Supplemental Charter of 1925. Licentiates who are eligible and desirous of transferring to the Fellowship can obtain full particulars on application to the Secretary R.I.B.A., stating the clause under which they propose to apply for nomination.

OVERSEAS APPOINTMENTS.

Members contemplating applying for appointments overseas are recommended to communicate with the Secretary R.I.B.A., who will supply them with any available information respecting conditions of employment, cost of living, climatic conditions, etc.

ANNUAL SUBSCRIPTIONS.

Members' subscriptions, Students' and Subscribers' contributions became due on 1 January 1931.

The amounts are as follows:—

Fellows	£5 5 0
Associates	£3 3 0
Licentiates	£3 3 0
Students	£1 1 0
Subscribers	£1 1 0

COMPOSITION OF MEMBERS' SUBSCRIPTIONS FOR LIFE MEMBERSHIP.

The attention of Members is drawn to the scheme for compounding subscriptions for Life Membership which was approved by the General Body at the Business Meeting held on Monday, 5 December 1927.

Fellows, Associates and Licentiates of the Royal Institute may become Life Members by compounding their respective annual subscriptions on the following basis:—

For a Fellow by a payment of £73 10s. (70 guineas).

For an Associate or Licentiate by a payment of £44 2s. (42 guineas), with a further payment of £29 8s. on being admitted as a Fellow.

Provided always that in the case of a Fellow or Associate the above compositions are to be reduced by £1 1s. per annum for every completed year of membership of the Royal Institute after the first five years, and in the case of a Licentiate by £1 1s. per annum for every completed year of membership of the Royal Institute.

NEW CLASSES OF RETIRED MEMBERS.

Under the provisions of the revised Byelaw No. 15 applications may now be received from those members

who are eligible for transfer to the class of "Retired Fellows," "Retired Associates," or "Retired Licentiates."

The revised Byelaw is as follows:—

"Any Fellow, Associate or Licentiate who has reached the age of fifty-five and has retired from practice may, subject to the approval of the Council, be transferred without election to the class of 'Retired Fellows,' 'Retired Associates,' or 'Retired Licentiates,' as the case may be, but in such case his interest in, or claim against the property of, the Royal Institute shall cease. The amount of the annual subscription payable by such 'Retired Fellow,' 'Retired Associate' or 'Retired Licentiate' shall be £1 *rs. od.*, or such amount as may be determined by resolution of the Council, excepting in the case of those who have paid subscriptions as full members for thirty years, and who shall be exempt from further payment. A 'Retired Fellow,' 'Retired Associate,' or 'Retired Licentiate' shall have the right to use the affix of his class with the word 'Retired' after it, shall be entitled to receive the 'JOURNAL' and *Kalendar*, shall be entitled to the use of the Library, and shall have the right to attend General Meetings, but shall not be entitled to vote. A 'Retired Fellow,' 'Retired Associate' or 'Retired Licentiate' shall not engage in any avocation which in the opinion of the Council is inconsistent with that of architecture. Nothing contained in this Bye-law shall affect the rights of persons who at the date of the passing of this Bye-law are members of the classes of 'Retired Fellows' and 'Retired Members of the Society of Architects.'"

EXHIBITION OF THE ARCHITECTURE OF MODERN TRANSPORT.

The subject selected by the Exhibition Committee for this year's exhibition at the R.I.B.A. is "The Architecture of Modern Transport." The exhibition is one of the series of important exhibitions held biennially. It will consist of photographs, drawings and models of architectural and decorative subjects connected with modern transport and is intended to illustrate the latest developments in such work both in Europe and America. The types of work covered by the title include railway stations, signal boxes, various types of railway coaches, docks, harbour works, canal power stations and locks, liners and yachts, bus and coach stations, garages and filling stations, trams, buses, charabancs and private cars, bridges and viaducts, pylons, traffic control stations, hangars and aerodromes, aeroplanes and airships, lifts and moving stairways.

The exhibition will be formally opened by Mr. H. G. Wells on Tuesday, 21 April, at 3 p.m., and it will remain open until 22 May, between the hours of 10 a.m. and 8 p.m. (Saturdays 5 p.m.).

Members are cordially invited to attend the opening ceremony. It is hoped that they will do their utmost to ensure that all their friends visit the exhibition while it is open and thus justify the time, trouble and expense which have been incurred in arranging it. No charge will be made for admission.

Competitions

BIRKENHEAD: NEW CENTRAL LIBRARY.

The Birkenhead Corporation propose to invite architects to submit, in open competition, designs for a new

Central Library to be erected in Market Place South. Mr. A. N. Prentice [F.] will be the Assessor. (Conditions are not yet available.)

BIRMINGHAM: CENTRAL MUNICIPAL BANK AND HEAD OFFICES.

The Committee of Management of the Birmingham Municipal Bank invite architects to submit, in open competition, designs for a new Central Municipal Bank and Head Offices to be erected in Broad Street.

Assessor: Sir Reginald Blomfield, Litt.D., R.A. [F.].

Premiums: £400, £300 and £150.

Last day for receiving designs: 18 April 1931.

Conditions of the competition may be obtained on application to Mr. Herbert H. Humphries, City Engineer and Surveyor, Council House, Birmingham. Deposit £3 3s.

BRISTOL: WAR MEMORIAL.

The *Bristol Times and Mirror* invite Bristol architects and assistants to submit, in competition, designs for a War Memorial to be erected in Colston Avenue. The Assessor will be Mr. G. C. Lawrence, R.W.A. [F.].

Conditions of the competition may be obtained from the Editor, *Bristol Times and Mirror*, St. Stephen Street, Bristol.

(Conditions have not yet been received.)

COVENTRY: NEW BRANCH BATHS.

The City Corporation of Coventry invite architects to submit, in open competition, designs for new Branch Baths, to be erected at Foleshill, Coventry.

Assessor: Mr. F. J. Horth [F.].

Premiums: 200 guineas, 100 guineas and 50 guineas.

Last day for receiving designs: 30 June 1931.

Conditions of the competition may be obtained on application to Mr. Frederick Smith, Town Clerk, Council House, Coventry. Deposit £1 *rs.*

(Conditions have not yet been received.)

COVENTRY: ISOLATION HOSPITAL.

The City Corporation of Coventry invite architects to submit, in open competition, designs for a new Isolation Hospital for Infectious Diseases to be erected at Pinley.

Assessor: Mr. E. Stanley Hall [F.].

Premiums: £300, £200 and £100.

Last day for receiving designs: 30 April 1931.

Conditions of the competition may be obtained on application to Mr. Frederick Smith, Town Clerk, Council House, Coventry. Deposit £1 *rs.*

DUDLEY: NEW COUNCIL SCHOOL.

The Dudley Education Authority invite architects within a radius of 15 miles of Dudley to submit, in competition, designs for a new Council School to be erected at Blowers Green, Dudley.

Assessor: Mr. Herbert T. Buckland [F.].

Last day for receiving designs: 1 June 1931.

Conditions of the competition may be obtained on application to Mr. J. Whaley, Director of Education, Education Offices, St. James's Road, Dudley.

(Conditions have not yet been received.)

LEICESTER: NEW OFFICES FOR CORPORATION DEPARTMENTS.

The City Corporation of Leicester invite architects in the British Isles to submit, in open competition, designs for new offices for Corporation Departments, to be erected in Charles Street.

Assessor: Mr. E. Berry Webber [A.].

Premiums: £300, £200 and £100.

Last day for receiving designs: 26 June 1931.

Conditions of the competition may be obtained on application to Mr. A. T. Gooseman, M.Inst.C.E., City Engineer and Surveyor, Town Hall, Leicester. Deposit £2 2s.

(Conditions have not yet been received.)

MANCHESTER: TEMPORARY GARAGE.

The promoters of the Manchester Building Trades Exhibition invite architects to submit, in open competition, designs for a Temporary Garage, for use in connection with the Exhibition.

Assessors: Mr. H. S. Fairhurst [F.], Professor A. C. Dickie [A], Mr. John Swarbrick [F.].

Premiums: £100, £30 and £20.

Last day for receiving designs: 11 April 1931.

Conditions of the competition may be obtained on application to "Architectural Competition," Competition Manager, City Hall, Deansgate, Manchester.

(Conditions have not yet been received.)

SOUTH SHIELDS: INGHAM INFIRMARY.

The Committee of Management of the Ingham Infirmary, South Shields, invite architects in the area of the Northern Architectural Association to submit, in competition, designs for proposed extensions.

Assessor: Lt.-Col. George Reavell, O.B.E. [F.].

Premiums: £250, £100, and £50.

Last day for receiving designs: 16 June 1931.

Conditions of the competition may be obtained on application to Mr. John Potter, Secretary, Ingham Infirmary, South Shields. Deposit, £2 2s.

(Conditions have not yet been received.)

SOUTHWARK: NEW TOWN HALL.

The Metropolitan Borough of Southwark propose to hold a limited competition for new Offices, Town Hall, Museum and Library. Intending competitors should send in their names, on or before 10 April 1931, together with a statement of executed works, to Mr. D. T. Griffiths, Town Clerk, Town Hall, Walworth Road, S.E.17. Six names will be chosen for the final competition and the successful design selected by the Assessor, Mr. Louis de Soissons, O.B.E. [F.]. The remaining five competitors will each receive an honorarium of 200 guineas.

Members' Column

PRACTICE WANTED.

MEMBER desires to purchase established Practice in Provinces. South preferred. State full particulars to Box No. 1731, c/o The Secretary R.I.B.A., 9 Conduit Street, W. 1.

CHANGE OF ADDRESS.

Mr. RAYMOND C. STEVENSON [A.] wishes all correspondence and trade publications to be sent until further notice to him c/o The Board of Public Works, Stephens Green, Dublin.

Mr. ERIC COLE, A.R.I.B.A., of Cheltenham, has opened an office at No. 7, Market Place, Cirencester, in collaboration with L. W. Barnard and Partners, architects. Catalogues will be welcomed.

A.B.S. INSURANCE DEPARTMENT.

HOUSE PURCHASE SCHEME

(for property in Great Britain only).

Further Privileges now Available.

The Society is able, through the services of a leading Assurance Office, to assist an Architect (or his client) in securing the capital for the purchase of a house for his own occupation, on the following terms:—

AMOUNT OF LOAN.

Property value exceeding £666, but not exceeding £2,500, 75 per cent. of the value.

Property value exceeding £2,500, but not exceeding £4,500, 66½ per cent. of the value.

The value of the property is that certified by the Surveyor employed by the Office.

N.B.—Legal costs and survey fees, and, in certain cases, the amount of the first quarter's premium payment will be advanced in addition to the normal loan.

RATE OF INTEREST.

In respect of loans not exceeding £2,000 5½ per cent. gross

" " in excess of " 5¼ " "

REPAYMENT.

By means of an Endowment Assurance which discharges the loan at the end of 15 or 20 years, or at the earlier death of the borrower.

SPECIAL CONCESSION TO ARCHITECTS.

In the case of houses in course of erection, it has been arranged that, provided the Plan and Specification have been approved by the Surveyor acting for the Office, and the amount of the loan agreed upon, and subject to the house being completed in accordance therewith, ONE HALF of the loan will be advanced on a certificate from the Office's Surveyor that the walls of the house are erected and the roof on and covered in.

NOTE.—Since 1928, over £50,000 has been loaned to architects under this scheme, and as a result over £600 has been handed to the Benevolent Society.

If a quotation is required, kindly send details of your age next birthday, approximate value of house and its exact situation, to the Secretary, A.B.S. Insurance Department, 9 Conduit Street, London, W.

It is desired to point out that the opinions of writers of articles and letters which appear in the R.I.B.A. JOURNAL must be taken as the individual opinions of their authors and not as representative expression of the Institute.

R.I.B.A. JOURNAL.

DATES OF PUBLICATION.—1931:—18 April; 2, 16 May; 6, 20 June; 11 July; 8 August; 19 September; 17 October.

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